

**U.S. Department of the Interior
Bureau of Land Management**

Vale District Office
100 Oregon Street
Vale, Oregon 97918

March 2000

*Bully Creek
Landscape Area
Management Project*



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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Vale, Oregon 97918-9630
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IN REPLY REFER TO:
1600

MAR 16 2000

Dear Public Land User:

This document is the final Bully Creek Landscape Area Management Project (LAMP) and Decision Record/Finding of No Significant Impact. This document was prepared by the Bureau of Land Management in accordance with the Federal Land Policy and Management Act of 1976, the National Environmental Policy Act of 1969 and other applicable laws directing the management of natural resources and public lands. It is the compilation of extensive public input from varied sources and view points and I would like to take this opportunity to thank those members of the public who took the time and energy to involve themselves in this process. While the planning is completed, opportunity for public involvement will continue, as appropriate, throughout the life of the project as implementation progresses. While we recognize that every want and desire of all involved could not be attained, we do believe that together we have crafted management that will improve the condition and function of natural systems and protect resource values for use by current and future generations of public land users.

This document is the first in a line of similar landscape level planning efforts for the three resource areas making up the Vale District. It is our hope that with this document we have established a standard for natural resource planning that can be built upon with future planning efforts. It is important that you review this document and the decision thoroughly. If you find it necessary to protest or appeal part or all of the decision, you must do so in accordance with the procedures described in the Decision Record. If you have questions concerning the process, please contact Mr. Tom Dabbs at (541) 473-6212.

Thank you for your continued interest in the management of your public lands.

Sincerely,

S/Roy L. Masinton
Roy L. Masinton
Field Manager
Malheur Resource Area

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

Bureau of Land Management
Vale, Oregon

Introduction

This Decision Record documents the decisions reached by the Bureau of Land Management for managing 268,823 acres of public land in the Bully Creek Landscape Area within the Malheur Resource Area of the Vale District.

Several alternatives for management of the Bully Creek Landscape Area were analyzed and are described in detail in the Bully Creek Landscape Area Management Project (LAMP) and Environmental Assessment, EA OR-030-99-019. The alternatives and management objectives were formulated by an interdisciplinary team of resource specialists using input from public participation beginning with a scoping notice and public meeting in November 1998.

Finding of No Significant Impact

On the basis of the information contained in the Environmental Assessment and all other information available to me, it is my determination that none of the alternatives constitutes a major federal action significantly affecting the quality of the human environment. Therefore, an Environmental Impact Statement is unnecessary and will not be prepared.

Rationale for FONSI and Decision

As analyzed and documented in EA OR-030-99-019, the proposed action is not expected to cause any significant adverse impacts to the critical elements of the human environment. The Bureau of Land Management, Vale District, Malheur Resource Area has considered and analyzed several alternatives for management of the Bully Creek Landscape Area. The BLM is tasked with the job of multiple use management as mandated under the Federal Land Policy and Management Act, Taylor Grazing Act and numerous other laws and regulations which govern the management of public lands. The area was assessed for compliance with the Standards for Rangeland Health as a part of this project and results are summarized in Appendix C. Implementation of the proposed action will meet the requirement in 43 CFR 4180 for the authorized officer to take appropriate action where livestock grazing is a significant factor for not meeting, or for not making significant progress toward meeting, a particular Rangeland Health Standard. The proposed action provides a balance between those reasonable measures necessary to protect the existing resource values and the continued public need to make beneficial use of the area. Therefore, the implementation of the proposed action is the best alternative to comply with all applicable laws, regulations, policy and agency directions.

The proposed action is in conformance with the Northern Malheur Management Framework Plan (1979) and the BLM Riparian Area Management Policy (1987), and it complies with 43 CFR 4180 (Standards for Rangeland Health, 1997). It incorporates the Scientific Assessment findings from the Interior Columbia Basin Ecosystem Management Project (ICBEMP) and is compatible

with the draft management direction in the ICBEMP and the Southeastern Oregon Resource Management Planning efforts, which respond to the Scientific Assessment findings.

Mitigation and Monitoring

All protective measures identified in Section 7.0 of the LAMP will be taken to avoid or reduce adverse impacts throughout the plan implementation. All practical means to avoid or reduce environmental harm will be adopted, monitored and periodically evaluated as appropriate.

Monitoring will be conducted as identified in Section 8.0 (Monitoring) of the LAMP. Monitoring and periodic evaluation will be used to ensure that the plan is being implemented and that progress is being made towards goals and objectives.

Public Involvement

Information concerning the amount of public involvement and consultation is found in Sections 6.3 and 9.0 of the LAMP. A summary of comments received and responses to those comments including descriptions of where changes were made as a result of comments are found in Appendix E of the LAMP.

Decision

After having considered the full range of alternatives and associated impacts and assessment of compliance with the Standards for Rangeland Health it is my decision to implement the Proposed Action as described in Section 7.0 and 8.0, Appendix A-8(Initial Proposed Projects) and Appendix C (Allotment/Pasture Characterizations and Grazing Schedules) of the LAMP.

Upon this decision becoming final, in accordance with the grazing regulations (4130.2 and 4130.3) all grazing permits within the LAMP area will be modified and reissued for a period of ten years with the term and condition that grazing use shall be conducted in accordance with the Bully Creek LAMP.

Because the decision represents a variety of management actions that are not entirely related to grazing management, the decision has been separated into those actions which are protestable or appealable under the grazing management regulations (43 CFR 4160.2) and those which are appealable under general land management regulations (43 CFR 4).

Administrative Review

Parties may protest and appeal for administrative review in accordance with the following procedures.

General Land Management Decisions.

It is my final decision to implement, over time, those portions of Section 7.0 of the LAMP that are non-grazing decisions within the following management actions: Best

Management Practices; Mechanical Control - Sagebrush, Juniper; Seedings - Native, Non-Native; Plantings - Forbs, Shrubs; Prescribed Burns - Sagebrush, Juniper, Annual Rangeland/Seedings, Aspen, Forest; Water Developments - Wildlife; and Weed Control. Review procedures are as follows:

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and BLM Form 1842-1. If an appeal is taken, your notice of appeal must be filed with the Field Manager of the Malheur Resource Area, 100 Oregon Street, Vale, OR 97918 within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

Request for Stay

Should you wish to file a petition, pursuant to regulation 43 CFR 4.21, for stay (suspension) of the effectiveness of this decision pending the outcome of an appeal, the petition for stay must accompany your notice of appeal. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for stay is required to show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

Grazing Management Decision

It is my proposed decision to implement over time, those recommendations pertaining to grazing management contained in Section 7.0 and 8.0, Appendix A-8(Initial Proposed Projects) and Appendix C (Allotment/Pasture Characterizations and Grazing Schedules) of the LAMP. Review procedures are as follows:

Decisions specified in the above sections of this document constitute my proposed decision and may be protested in accordance with Title 43 CFR Part 4160.2, Protests. You are allowed 15 days from receipt of this decision within which to file a protest with the Field Manager of the Malheur Resource Area, 100 Oregon Street, Vale, OR 97918. A protest may be made in person or in writing to the Field Manager and should specify the reasons, clearly and concisely, as to why you think the proposed decision is in error.

If a protest is filed within the time allowed, the protest statement of reasons and

other pertinent information will be considered and a final decision will be issued with a right to appeal in accordance with Title 43 CFR 4160.4, Appeals.

In the absence of a protest within the time allowed, this proposed decision shall constitute my final decision. Should this notice become the final decision and if you wish to appeal this decision for the purpose of a hearing before an Administrative Law Judge, in accordance with Title 43 CFR 4.470, you are allowed forty five (45) days from receipt of this decision to file an appeal with the Field Manager of the Malheur Resource Area at the above address. The appeal should state the reasons, clearly and concisely, as to why you think the decision is in error relative to each individual allotment. Any request for stay of this decision in accordance with 43 CFR 4.21 must be filed with your appeal.

S/ Roy L. Masinton

Roy L. Masinton
Field Manager
Malheur Resource Area
Vale District, Bureau of Land Management

3-16-2000

Date

Abbreviations and Acronyms

ACEC	Area of Critical Environmental Concern	M	Maintain allotments
AD	Administrative Determination	MOWC	Malheur-Owyhee Watershed Council
AMP	Allotment Management Plan	MFP	Management Framework Plan
AUM	Animal Unit Month	NEPA	National Environmental Policy Act
BCWC	Bully Creek Watershed Coalition	ND	No Data
BLM	Bureau of Land Management	NF	Non-functioning
C	Custodial allotments	NRCS	Natural Resources Conservation Service
CFR	Code of Federal Regulation	ODA	Oregon Department of Agriculture
DRFC	Desired Range of Future Condition	ODEQ	Oregon Department of Environmental Quality
EA	Environmental Assessment	ODFW	Oregon Department of Fish and Wildlife
EIS	Environmental Impact Statement	OR	Oregon
FARD	Functioning At Risk Downward	PFC	Proper Functioning Condition
FARN	Functioning At Risk Not Apparent	PL	Public Land
FARU	Functioning At Risk Upward	PV	Private
FFR	Fenced Federal Range	RAC	Resource Advisory Council
FLPMA	Federal Land Policy and Management Act	RNA	Research Natural Area
FY	Fiscal year (October 1 through September 30 annually)	RPS	Rangeland Program Summary
GWEB	Governor's Watershed Enhancement Board	SEORMP	Southeastern Oregon Resource Management Plan
HMA	Herd Management Area	SRH	Standards for Rangeland Health
HUC	Hydrologic Unit Code	USDA	U.S. Department of Agriculture
I	Improve allotments	USDI	U.S. Department of the Interior
ICBEMP	Interior Columbia Basin Ecosystem Management Project	USFWS	U.S. Fish and Wildlife Service
ID	Interdisciplinary	VDMP	Vale District Monitoring Plan
IMP	Interim Management Policy	VRM	Visual Resource Management
LAMP	Landscape Area Management Project	WQMP	Water Quality Management Plan
		WSA	Wilderness Study Area
		WSRS	Wild and Scenic River System

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BULLY CREEK LANDSCAPE AREA MANAGEMENT PROJECT

Section 1.0 Introduction

The Bully Creek Landscape Area Management Project (LAMP) within the Malheur Resource Area, Vale District, Bureau of Land Management (BLM), represents ground-level resource planning for public land. This project is consistent with the management direction of two larger, broad-scale planning documents: the *Interior Columbia Basin Ecosystem Management Project* (ICBEMP) *Eastside Draft Environmental Impact Statement* (USDA/USDI 1997) and the draft *Southeastern Oregon Resource Management Plan/Environmental Impact Statement* (SEORMP/EIS) (USDI/BLM 1998b). When all phases of planning have been completed, there will be three levels of planning documents stair-stepping from the broad multi-state region (ICBEMP) to the sub-regional level in southeastern Oregon (SEORMP/EIS) to the subbasin or landscape level (LAMP). This LAMP incorporates the science, best management practices, and intent identified in both upper levels of the broad-scale planning documents. The LAMP does not reiterate the findings or analysis already presented in those documents, but will reference pertinent sections of those documents, as necessary, for supporting text. The Bully Creek Landscape Area Management Project is the first in a series of nine project documents to be developed for public land within the Malheur Resource Area.

Since this LAMP precedes the final publication of ICBEMP (USDA/USDI 1997) and SEORMP/EIS (USDI/BLM 1998b), these are not the decision documents driving BLM's recommendations and subsequent decisions regarding the management of natural resource values within the Bully Creek landscape area. As a result, the LAMP relies on the analysis of significant impacts and management direction and is consistent with the *Northern Malheur Management Framework Plan* (USDI/BLM 1980a, 1980b), 43 CFR 4180 and Riparian Area Management (1993). This LAMP is developed only for public land administered by the BLM within the Bully Creek landscape area (Appendix B, Map B-1).

1.1 Purpose and Need

The purpose for developing the LAMP is to (1) assess ecosystem and resource values such as water quality and quantity and riparian, aquatic and upland habitats on a broader watershed-based scale than the traditional allotment and pasture levels; (2) coordinate planning and project development with the Bully Creek Watershed Coalition (BCWC) and the Malheur-Owyhee Watershed Council (MOWC) who have written management plans for private land within the same landscape area; and (3) address known criteria in one document to build efficiency into the

planning process and focus limited staffing and funding to on-the-ground actions.

The need for developing the LAMP is to comply with laws, mandates, regulations, policies and Executive Orders in directing multiple-use management on public land. Among these directives is the need to (1) develop Water Quality Management Plans (WQMPs) and meet Oregon Department of Environmental Quality (ODEQ) standards for water quality (ODEQ 1997) in compliance with the Clean Water Act; (2) implement the *Standards for Rangeland Health and Guidelines for Livestock Grazing Management* (SRH) (USDI/BLM 1997); and (3) conduct allotment evaluations and address livestock grazing through the Allotment Management Plan (AMP) process. In addition, several broad-scale planning documents (ICBEMP, SEORMP/EIS), once finalized, are expected to contain specific requirements for their implementation including *Subbasin Review and Ecosystem Analysis at the Watershed Scale* (USDA/USDI 1997). Table 1 shows the components and criteria of various plans and evaluations addressed by this LAMP.

Table 1. Components and Criteria of Various Plans and Evaluations Addressed in the LAMP

WATER QUALITY MANAGEMENT PLAN	ALLOTMENT EVALUATION RANGELAND HEALTH ASSESSMENT	SUBBASIN REVIEW	ECOSYSTEM ANALYSIS AT THE WATERSHED SCALE
Condition Assessment Problem Description	Characterize Allotments, Authorized Use Describe Current Resource Conditions	Characterize the Subbasin	Characterize the Watershed Describe Current and Reference Conditions
Identify Goals/Objectives	Identify Standards/Objectives/Issues	Identify Issues at Broad and Smaller scales, and Subbasin Scale	Identify Key Issues and Questions
Identify Responsible Participants Public Involvement	Involve Permittees/Public	Form Interagency Team	Interdisciplinary Team/ Interagency Team Tribes/State/Local Govt/Public
Monitoring/Evaluation	Synthesize/Interpret Data Determine if: Rangeland Standards, Management Objectives are Being Met Determine Cause of Non-attainment		Synthesize/ Interpretation of Information

Develop Recommendations	Develop Recommendations		Develop Recommendations
Timeline for Implementation		Prioritize Activities	Priority Setting

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.

Within the landscape area, there are 12 I (improve) and M (maintain) allotments that have approved AMPs. The LAMP would describe new grazing schedules for these 12 allotments plus the 8 C (custodial) allotments.

In accordance with the grazing regulations (43 CFR 4180), BLM is required to implement the SRH and Guidelines for Grazing Management as developed for Oregon and Washington (USDI/BLM 1997) by the Southeast Oregon Resource Advisory Council (RAC). The RAC identified five standards (Table 2) that define minimum resource conditions to be achieved and maintained for public rangelands.

Table 2. Standards for Rangeland Health

Standard 1	Watershed Function-Uplands	Upland soils exhibit infiltration and permeability rates, moisture storage and stability that are appropriate to soil, climate and landform
Standard 2	Watershed Function Riparian/Wetlands Areas	Riparian-wetland areas are in proper functioning physical condition appropriate to soil, climate and landform.
Standard 3	Ecological Processes	Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate and landform are supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle.
Standard 4	Water Quality	Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.
Standard 5	Native, T&E Locally Important Species	Habitats support healthy, productive and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and landform.

Source : (USDI/BLM 1997)

The Malheur Resource Area prioritized and grouped grazing allotments into nine landscape areas. Where allotments straddled watershed subbasin boundaries, the allotments were included or excluded from the landscape area depending upon resource issues, conditions, concerns and other management considerations. Issues of concern for the landscape area were identified in cooperation with ranchers and other interested publics. Issues identified at the landscape level would be addressed at the allotment level rather than the watershed scale. Management actions

applied at this allotment level are more appropriate for rangeland improvement. This prioritization and grouping has been reviewed by the RAC and interested publics and will allow for SRH assessment and implementation for all allotments within the Resource Area within a 10-year time frame.

The assessment of a landscape is a three-step process: 1) data collection; 2) analysis, synthesis and interpretation of data; and 3) determination of conformance with SRH. Determination of conformance characterizes the health of the allotment, pasture or other management unit. The analysis and interpretation of data through this three-step process determines whether or not the area is meeting or making significant progress towards meeting standards and conforming to guidelines. The assessment process is similar to the allotment evaluation as previously used in the rangeland management program to evaluate whether or not grazing management was meeting resource objectives. The assessment process in the Bully Creek landscape area began in 1998. The data summaries, analysis and determinations are a part of this LAMP as summarized in Appendix C. Implementation of SRH involves the following step-down process:

- evaluate the desirability of existing vegetation trends and condition
 - conduct assessments to determine if areas are meeting, making significant progress towards or failing to achieve SRH;
 - if an area fails to achieve SRH, determine if current grazing is a significant factor;
 - if current grazing is a significant factor, take appropriate action by modifying terms and conditions of permits, authorizations and/or activity plans.

1.2 Description of the Landscape Area

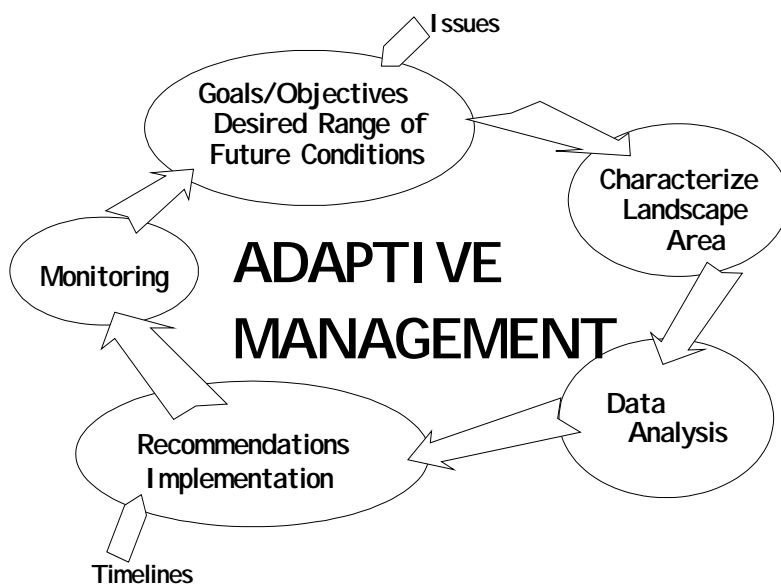
The Bully Creek landscape area is located northwest of Vale, Oregon. It includes eight watersheds in the Bully Creek subbasin and a portion of one watershed in the Lower Malheur subbasin. The landscape area consists of 386,300 acres, of which 268,800 acres are public land (Appendix B, Map B-1). Twenty grazing allotments comprising 108 pastures managed by the BLM occur within the landscape area (Table 5). The town of Westfall lies within the landscape area. The city of Vale with a population of approximately 1600, is the biggest town close to the landscape area. Smaller towns of Harper, Willowcreek, Brogan, and Jamieson are adjacent to the boundaries of the landscape area.

1.3 Relevant Planning Documents

The *Scientific Assessment* (USDA/FS 1996a) and *Summary of Scientific Findings* (USDA/FS 1996b) from the draft ICBEMP (USDA/USDI 1997) provided the broad-scale science used during the landscape area assessment. This process was aided by incorporating the findings from the *Bully Creek, Willow Creek and Lower Malheur River Subbasin Review* (USDI/BLM 1998a) and the draft SEORMP/EIS (USDI/BLM 1998b). The *Bully Creek Watershed Assessment and Strategy* (BCWC et al. 1997) and the draft *Malheur Basin Watershed Action Plan and Assessment* (MOWC 1998), two documents addressing watershed management activities on private land within the Bully Creek subbasin, were consulted and referenced during development of the LAMP. The guidelines from the draft and final *Ironside Grazing Management Environmental Impact Statement* (USDI/BLM 1980a, 1980b) and the *Rangeland Program Summary, Record of Decision for the Ironside EIS Area* (USDI/BLM 1982) have also been consulted. At present, management actions are addressed under the *Malheur Resource Area Management Framework Plan* (USDI 1979).

1.4 Adaptive Management

Adaptive management, as applied in the LAMP, is depicted in the accompanying illustration. It is a continuing process that ensures that management strategies will be adjusted to meet goals and objectives through planning, implementation, monitoring and evaluation. The process emphasizes results and makes adjustments when needed. A continual feedback loop based on new information allows for mid-course corrections to standards, guidelines and underlying assumptions in order to meet planned goals and objectives. It could also be used as a model for adjusting goals and objectives as new information develops.



Section 2.0

Goals and Resource Issues

Seven broad goals were identified for the Bully Creek Landscape area which relate directly to goals described in large- and mid-scale planning documents (draft ICBEMP (USDA/USDI 1997), draft SEORMP/EIS (USDI/BLM 1998b)) and the two watershed assessments which address private land (BCWC et al. 1997; MOWC 1998). The broad goals which serve as a link between the larger adjoining ecosystems and the landscape area are listed below and have been addressed during various public meetings:

- Improve BLM's ability to manage natural resources on a landscape basis.
- Sustain, and where necessary, restore priority plant and animal habitats including riparian areas, priority watersheds and rangeland ecosystems.
- Emphasize the control of noxious weeds and undesirable non-native plants.
- Provide diverse recreational and educational opportunities within the capability of the ecosystems in the landscape area.
- Reduce hazardous fuels to improve the health of vegetation communities.
- Manage natural resources consistent with treaty and trust responsibilities to American Indian tribes.
- Provide a predictable, sustained flow of economic benefits within the capability of the ecosystems in the landscape area.

Stepping down from the broad goals, eight resource issues were addressed in the overall assessment of the landscape area. Although the issues are described separately, they are inherently linked to each other in terms of ecosystem management. The resource issues were identified through a series of scoping meetings, in coordination with interested and affected publics, through a review of existing data and existing and draft planning documents. BLM recognizes, and the public needs to be made aware, that there will be areas within the Bully Creek watershed which, due to their varying degrees of potential may not be able to attain one or more of the stated goals. For instance all riparian/wetland areas cannot be expected to provide habitat for fish nor will all drainages be capable of supporting year-around surface water. The following eight issues with their specific goals and descriptions address the seven broad LAMP goals described above. They are not listed in priority order.

Issue 1: Water Quality/Quantity

Issue: BLM currently manages stream segments within the Bully Creek subbasin that are not meeting the State of Oregon's Water Quality standards which were developed to

comply with the Clean Water Act. Water quality, fisheries, aquatic habitat and water contact recreation are beneficial uses adversely impacted by not meeting water quality standards.

Description: In the lower part of the landscape area, Bully Creek has documented algae growth and eutrophic conditions resulting in diurnal fluctuations in dissolved oxygen and pH. Bacteria has been documented in Bully Creek from Westfall to the reservoir, and high nutrient levels and possible sediment, temperature and habitat issues are also suspected throughout the area. Other streams do not meet the standards due to water temperature, pH, fecal coliform and other factors.

Goals: Improve water quality and meet state standards in compliance with the Clean Water Act. Increase natural upstream soil-water storage for late-season use and more consistent releases for downstream needs.

Issue 2: Vegetation Composition, Structure, Diversity and Productivity

Issue: Current vegetation structure, diversity and composition do not meet the BLM's SRH and are deficient in portions of the landscape area in meeting the desired forage requirements of livestock and wildlife. Some areas also lack the cover necessary to stabilize the soils, slow surface runoff, control erosion and slow the invasion of undesirable plants.

Description: Upland vegetation provides the foundation for many resource uses of public land. Structurally and vegetatively diverse communities provide habitat for wildlife and forage for domestic animals. They also contribute to species diversity across the landscape. A healthy cover of perennial vegetation stabilizes the soil, maintains infiltration of precipitation, slows surface runoff, controls erosion, ensures clean water entering adjacent streams and enhances the visual quality of public land. Forage produced on public land is made available to grazing wildlife and livestock.

Goals: Restore, maintain or improve the diversity, distribution and abundance of native plant species and communities, as well as desirable introduced plant communities. Provide for their normal function in nutrient, water and energy cycles and soil stabilization. Maintain or restore connections between similar habitats to reduce fragmentation of specific communities.

Issue 3: Fisheries/Aquatic Habitat

Issue: Portions of some streams otherwise capable of supporting fish and other aquatic species currently are not because poor riparian conditions have affected water temperature, sediment and pollutants.

Description: The condition of fisheries habitat is related to riparian/wetland areas and stream channel characteristics. Healthy riparian vegetation moderates water temperature, adds bank structure to reduce erosion, and provides overhead cover for fish. Floodplains with intact plant communities dissipate stream energy and store water for later release. Water quality factors such as temperature, sediment and dissolved oxygen also affect fisheries habitat.

Goals: Restore, maintain or improve habitat to provide for diverse and self-sustaining communities of fish and other aquatic organisms. Manage habitat to maintain distribution of native species, allow for natural dispersal and movement between watersheds, and promote species interactions that are part of the ecosystem processes. Opportunities for recreational fishing are also emphasized.

Issue 4: Riparian/Wetland Areas

Issue: Portions of perennial and intermittent streams and associated riparian vegetation are not functioning properly according to SRH.

Description: Riparian/wetland areas are locally important because many watersheds in the landscape area currently lack perennial streams. Existing perennial and intermittent streams are limited in their potential to improve due to past and current grazing practices, increased elk populations, topography, shallow soils, flash floods and low precipitation. Many streams with perennial or intermittent flow do not provide adequate vegetation to maintain and/or support a healthy riparian habitat. Streams supporting redband trout and other native fishes require properly functioning riparian ecosystems to meet state water quality standards for temperature, sediment and pollutants. Some riparian/wetland areas may be prevented from achieving their potential because of limiting factors such as human activities.

Goals: Ensure riparian/wetland areas achieve, at a minimum, proper functioning condition (PFC) to dissipate energy from high water flows, reduce erosion, improve water quality, filter sediment, improve floodwater retention and groundwater recharge, provide habitat for fish and wildlife populations and support greater biodiversity.

Issue 5: Weeds

Issue: Class A weed infestations continue to expand within the LAMP area. Established weed infestations deteriorate the resource values on public and private lands and may create economic impacts for control, loss of production and may hinder the reestablishment of native plant species.

Description: Public and private land within the Bully Creek landscape area exhibit

moderate to high vulnerability to weed invasions. Weed dispersal has been intensified by both human and environmental factors (vehicles, road systems, livestock, wildlife, flooding, irrigation, etc.). Establishment and dominance of weedy species typically results in deteriorated resource values. Management actions which resolve other resource issues (prescribed fire or juniper encroachment) are complicated by the increased short- and long-term susceptibility of treated land to weed invasion.

Goal: Reduce the occurrence of new noxious weed infestations across the landscape and reduce or eliminate existing populations of Class A weeds.

Issue 6: Wildlife Habitat

Issue: Portions of the LAMP area do not meet the SRH for wildlife by lacking the appropriate habitat composition and diversity necessary to meet the yearlong needs of wildlife.

Description: Many habitat types were and continue to be impacted by historic and ongoing activities such as grazing practices, agricultural clearing, reservoirs, fire management and human development. Today, habitat degradation of big game winter range forces deer, pronghorn and elk to move onto private agricultural land resulting in economic losses. Several species currently on Federal and state lists, including sage grouse, occur within the landscape area. Desired sage grouse habitat conditions are below site potentials in some areas. BLM cooperates with ODFW (Oregon Department of Fish and Wildlife), USFWS (U.S. Fish and Wildlife Service), adjoining landowners, livestock permittees and others to maintain or improve wildlife habitat for all species.

Goals: Maintain or restore habitat for healthy, productive and diverse populations of wild-life, ensuring that habitat requirements for viable populations are maintained and not adversely impacted by management actions. Emphasize management of Federally listed, proposed and candidate species, state listed species, BLM sensitive species, species protected by international treaties, and species used for recreational and subsistence activities. Work with ODFW to develop population goals for resident species consistent with habitat potential and with USFWS on habitat management for Federally listed, proposed and candidate species.

Issue 7: Juniper Encroachment

Issue: Juniper has expanded beyond pre-fire suppression patterns, decreasing forage and habitat for wildlife and livestock and potentially increasing soil erosion.

Description: BLM and other collaborators are concerned with expanding juniper acreages, increased erosion potential, loss of moisture in soils and decreased rangeland

forage and habitat for sage grouse, pronghorn and livestock. Juniper removal is complicated by control costs and uncertain economic benefit. Removal can cause increased weed invasion and erosion potential following fire, mechanical control or chemical application. In addition, there are unknown effects from some control activities to wildlife populations such as sage grouse (due to a loss of shrub communities) and big game species which are of high value to local residents.

Goal: Reduce juniper in areas where it has expanded beyond pre-fire suppression distribution.

Issue 8: Recreation

Issue: More people are using the public land for recreation. This increase in use strains some resources and may result in conflicts with traditional uses.

Description: Within the landscape area, local people, including the Tribes, feel strongly about the importance of public land for recreation and subsistence fishing/hunting. The close proximity of Bully Creek Reservoir, a large irrigation reservoir on non-BLM land, allows easy access to trout and warm water fisheries. Of lower value are existing rangeland stockpounds and small streams on public land. Hunting big game and upland game birds is also highly valued. Common species include mule deer, elk, pronghorn, chukar and sage grouse on public land and pheasant, quail and waterfowl on private land. Observing wildlife is a growing interest with focus on big game and bird species. Traditional plant gathering areas utilized by Native Americans are also being utilized by people of other nationalities.

Goals: Create diverse recreational opportunities for local and regional publics. Balance recreation and subsistence opportunities for all users, while restoring and protecting natural resources and ecosystem health.

Section 3.0 Desired Range of Future Conditions

The Desired Range of Future Conditions (DRFCs) for the landscape area are described in the draft SEORMP/EIS (USDI/BLM 1998b). The DRFCs portray the land, resource and socio-economic conditions expected in 50 to 100 years as the LAMP objectives (described below) are achieved. The intent of these objectives is to move the ecosystem and its components towards DRFCs where there are identified deficiencies or to maintain current conditions at DRFCs.

Section 4.0

LAMP Objectives

Five LAMP objectives have been developed which incorporate the eight resource issues presented by the public and discussed in Section 2.0 blended with the five SRH (Table 2) that define the minimum resource conditions to be achieved and maintained for public rangelands. BLM is required to implement SRH and Guidelines for Grazing Management as developed for Oregon and Washington (USDI/BLM, 1997) in consultation with the Southeast Oregon Resource Advisory Council (RAC). BLM's obligation is to manage for resource values while taking into consideration the eight issues identified through the implementation of SRH in accordance with the grazing regulations (43 CFR 4180).

There are five primary objectives for the Bully Creek LAMP which address the prominent resource concerns within the landscape area. Issues and resources not specifically addressed by a primary objective (e.g., special status species) are covered by habitat needs or by more site-specific objectives applied on an allotment and/or pasture basis. Planned results are expected within a 10-year time period. Achieving the objectives would be measured by maintaining static trends (at a minimum) in habitats meeting the SRH and/or obtaining upward trends in habitats not meeting these standards.

Specific allotment and pasture management objectives are located in Appendix C.

Objective 1- Riparian/Wetland Vegetation Communities

Objective: Maintain (if meeting SRH) or improve (if not meeting SRH) riparian vegetation, habitat diversity, and associated watershed function to achieve healthy and productive riparian/wetland areas and achieve water quality standards for beneficial uses as established by ODEQ.

Rationale: Watershed function/riparian wetlands area (SRH 2) are to be in proper functioning condition appropriate to soil, climate, and land form. The hydrological effects of properly functioning condition contributes to the attainment of water quality standards as established by ODEQ and habitat requirements for wildlife. Attaining a proper functioning condition for Standard 2 would also help contribute to the resolution of the other issues.

Objective 2- Individual Seedings

Objective: Based on site-specific circumstances, one or more of the following objectives

would be applied to a seeded area:

1. Improve the productivity and vigor of the non-native seeding while maintaining the structural composition and improving species diversity of vegetation communities consistent with DRFCs identified in the land use plan.
2. Improve the productivity and vigor of the non-native seeding while improving the structural composition and improving species diversity of vegetation communities consistent with DRFCs identified in the land use plan.
3. Maintain the productivity and vigor of the non-native seeding while maintaining the structural composition and improving species diversity of vegetation communities consistent with DRFCs identified in the land use plan.
4. Improve the ecological status of the non-native seeding by implementing actions to enhance the dominance of native perennial grass species while maintaining the structural composition and improving species diversity of vegetation communities consistent with DRFCs in the land use plan.

Rationale: The maintenance and/or improvement of seedings in the Bully Creek Landscape Area was identified as parts of Issues 2, 3, 4, and 5. Maintaining or improving the hydrologic functions in seedings including infiltration rates, permeability, moisture storage, and soil stability, as well as the possible addition of shrubs, would contribute to meeting SRH 1: Watershed Function: Uplands and SRH 5: Native, T&E and Locally Important Species. Management that promotes healthy, productive, and diverse plant and animal populations and communities contribute to meeting SRH 3: Ecological Processes. Treatment or restoration would also contribute to high quality wildlife habitat.

Objective 3- Upland Vegetation Communities

Objective: Maintain (if meeting SRH) or improve (if not meeting SRH) the health, structure and diversity of upland native vegetation within site capabilities.

Rationale: The maintenance or restoration of healthy, diverse and productive plant communities in the uplands is the first step in supporting watershed function (SRH 1) and in influencing the timing, duration, quantity and quality of stream flow and promoting riparian area function (SRH 2 and 4). This maintenance and restoration also helps promote nutrient cycling, energy flow and supports the hydrologic cycle (SRH 3). Maintaining or restoring a healthy, diverse, productive upland plant community would also provide quality habitat for plant and animal populations and high quality forage consistent with SRH 5.

Objective 4- Weeds

Objective - Control proliferation of existing noxious weeds on an annual basis.

Rationale: The proliferation of noxious weeds affects the productivity of native plants and plant communities, degrades wildlife habitat, limits management actions, and use of invaded rangelands. The immediate threat of several highly invasive exotic weed species calls for continued controlling/eradication of all known County listed type “A” weeds and, subject to funding availability, lower rated County listed type “B” and “C”. The control of noxious weeds would be consistent with meeting SRH 2, 3, and 5.

Objective 5- Wildlife

Objective: Maintain (if meeting SRH) or improve (if not meeting SRH) wildlife habitats, ensuring spatial distribution of native plant communities and animal habitats across the landscape with a density and frequency of species suitable to ensure reproductive capability and sustainability.

Rationale: Maintaining or improving wildlife habitats to support healthy, productive and diverse populations and communities of native plants and animals (SRH 5) may be attained through the improvement or maintenance of Riparian Wetland communities (SRH 1), Upland communities (SRH 2), Ecological Processes (SRH 3) and Water quality (SRH 4). Quality wildlife habitat implies that the uplands are exhibiting infiltration, permeability, moisture storage, and soil stability appropriate for that soil, climate and landform. Quality wildlife habitat also implies that adequate vegetative cover and diversity supports hydrologic function and nutrient cycling and energy flow (SRHs 2 and 3). In areas where the uplands and riparian/wetlands are functioning properly, water quality and quantity, as well as timing and duration of streamflow, would be determined by physical and chemical properties of the geology and soils unique to the watershed, climate, weather and resource conditions. (SRH 4).

Section 5.0

Characterization of the Landscape Area

5.1 Topography/Climate

The Bully Creek Landscape Area varies from 2,500 feet in elevation near Bully Creek Reservoir to 6,400 feet on Cottonwood Mountain. The fringe of mountains to the west collects moisture deposited in the form of snow and rain from fall through early spring, resulting in mesic conditions at high elevations. Annual precipitation ranges from 14 inches in the western portion of the landscape area to 8 inches at the eastern edge, reflecting the more arid conditions at low elevations.

5.2 Air Quality

Air quality in the landscape area is good (airshed rating is Class II) with prevailing westerly winds. Dust and smoke occasionally impact air quality in the landscape area. Additional information related to climate and air resources is described in the draft SEORMP/EIS (USDI/BLM 1998b).

5.3 Geology

The landscape area is situated within portions of three physiographic provinces: (1) the Blue Mountain Province in the north and northwest; (2) the Basin and Range Province in the northeast, central, and southern regions; and (3) the Snake River Plain Province in the southeast (Orr et al. 1992). Dominant rock types found over approximately 60 percent of the area consist of Miocene and Pliocene basalt flows and pyroclastic deposits (Walker and MacLeod 1991). This volcanic activity included andesitic materials on the eastern end of the landscape area. Substantial amounts of Miocene-Pliocene rhyolitic material are also found, including a large domal complex in the southwestern portion of the area in the vicinity of Swamp and Gregory Creeks. A large deposit of Pliocene tuffaceous lake sediments is concentrated in the central region near Westfall. These deposits include tuff, breccia, fluvial tuffaceous sandstone, siltstone and mudstone, air-fall and water deposited vitric ash, fluvial sandstone, conglomerate and diatomite (Brooks and O'Brien 1992). Some of these sediments are capped by basalt flows and pyroclastic deposits or show evidence of hydrothermal activity. In addition to igneous formations, the extreme western end of the area is made up of pre-Tertiary metamorphic formations. The metamorphic rocks are mostly shale with high amounts of lime and silica.

5.4 Energy and Mineral Resources

Energy and mineral resources known or suspected to occur in the landscape area consist of geothermal resources, diatomite, hot-springs gold/mercury, porphyry copper-gold-molybdenum, vein gold, uranium, oil, gas and a variety of mineral materials. Intermittent mineral exploration has occurred in the area for over 80 years, mainly involving attempts to develop the low quality diatomite deposits situated in the southeastern portion of the area between Harper and Westfall. There has been little interest in any mineral resources other than three deep (>1,000 feet) geothermal exploration wells near Bully Creek Reservoir, “paver” rocks from Cottonwood Mountain and the occasional removal of small quantities of gravel from a BLM-designated community pit along Indian Creek.

At present, there are over 100 mining claims within portions of five allotments (Appendix A, Table A-1). All have been located for diatomite and are contained in four separate blocks. Active exploration/development is occurring on only one block of claims, the E/B group, which is operating under a current Notice of Operations (less than 5 acres of surface disturbance); at present, only the Bully Creek Seeding/Allotment #2 is affected. Four other Notices are currently on file with BLM; three have been abandoned, including the claims, and the fourth has been inactive for several years. Given the past mining history of the landscape area, energy and mineral exploration/development activity is not expected to change significantly in the future.

5.5 Soils

Soil information in the landscape area, especially on the higher elevation rangeland, is limited. Soil surveys have focused mainly on irrigable land (Lovell et al. 1969; Cox and Stoneman 1977; Malheur County Planning Office 1978; Lovell 1980), and a third order survey has yet to be completed. Other planning documents use existing surveys in combination with professional observations to derive soil information for the entire area (Malheur County Planning Office 1981; BCWC et al. 1997; MOWC 1998). Soils in the area have derived mainly from sedimentary deposits and volcanic activity (Lovell et al. 1969). Sedimentary deposits weather into sandy- or fine-textured, highly erosive soils. Volcanic rocks weather into various textured soils including some which are sticky and fine-textured. The arid climate and high silica and calcium carbonate content of many of the soils creates a cemented or indurated layer or hardpan (Soil Survey Staff 1998). Expression and thickness of these hardpans increases with distance from a stream and floodplain. In general, more soil development occurs on the uplands than in the floodplains and terraces.

Climate influences soil moisture regimes which vary from aridic ((dry most of the year)(Soil Survey Staff 1998)) conditions in lower elevations (east) to xeric (moist, cool winters, warm, dry summers) conditions in higher elevations (north and west). Soil temperatures range from mesic (8°-15° C) in the east, to frigid (below 8°C) in the west. Climate also influences the soil types found on: (1) floodplains, alluvial deposits and terraces; (2) grass-shrub uplands, lava plateaus and dissected sediments; and (3) forested uplands (Lovell et al. 1969; Malheur County Planning

Office 1978).

5.6 Vegetation

The landscape area lies within the sagebrush steppe vegetative zone within the northernmost fringe of the Owyhee Uplands physiographic province and the southernmost extent of the Blue Mountain physiographic province (Franklin and Dyress 1973). A rich mosaic of vegetative types is present within this sagebrush-dominated landscape.

Upland Vegetation Types and Patterns

In 1977, a partial soil/vegetation inventory was conducted by BLM on public land within the landscape area (USDI/BLM 1977). Soil and vegetation were classified based upon soil depth, moisture, aspect, slope and dominate grass, shrub and tree species. Identified vegetation types reflect a gradient of climate and soil from arid salt desert and annual grass communities at low elevations near Westfall to mesic, partly forested areas near the headwaters of Bully Creek (Appendix A, Tables A-2 and A-3). This inventory was general and, for example, did not distinguish between stiff sagebrush and low sagebrush community types on similar soils and topography. The 1977 inventory was supplemented with on-site observations during the 1998 SRH assessment to identify small but important plant communities, such as the squaw apple community within the Droughty Rolling Hills and Droughty North Exposure vegetation types.

Dominant plant species found on upland sites are listed in Appendix A, Table A-4. A complete list of Vale District plants is on file at the BLM office. The relative amounts and mix of species vary, based on soil type and depth, precipitation and historic use. Upland sites in degraded condition are often characterized by having (1) few to none of the larger native bunch grasses; (2) high densities and cover of big sagebrush, gray rabbitbrush or green rabbitbrush; (3) high densities of exotic species such as cheatgrass, bur buttercup, tumble mustard, Russian thistle or whitetop; and (4) Western juniper encroachment in more mesic areas (Appendix B, Map B-2).

Riparian and Wetland Vegetation

Inventories were conducted along most major drainages in 1997 and 1998 to locate riparian areas and assess their condition based on SRH (Appendix B, Map B-3). Stream reaches in recovery or at PFC typically support tree species such as willow, quaking aspen, cottonwood and water birch or shrubby species including coyote willow, golden currant, mock orange and wild rose. Healthy riparian areas also contain several species of native grasses, sedges and rushes. There are stream segments that have lost or are losing native vegetation, including shrub and aspen communities in high elevations. Some riparian areas are being invaded by noxious weeds and other exotic species, indicating disturbed or nonfunctioning stream systems. A comprehensive list of riparian vegetation found in the landscape area is on file at the BLM Vale District Office.

Modified Vegetation Communities

During the 1960's, the BLM initiated the Vale Project which proposed specific treatments for halting range deterioration (Heady and Bartolome, no date). Prior to 1962, no more than 0.1 percent of the rangeland in the Vale District (6.5 million acres) had received range improvement treatments which included about 30,000 acres of brush control by spraying, plowing and seeding and seeding after wildfires. The selection of sites for treatment was based upon the potential for improvement. Between 1962-1973, approximately 16,500 acres within the landscape area were sprayed with herbicides to kill sagebrush and release native grasses or were seeded with crested wheatgrass. Sagebrush has reestablished to varying degrees in all crested wheatgrass seedings in the landscape area; however, most of the treated areas still have reduced perennial grass and forb understories. Other modified communities include high elevation areas where fire suppression has resulted in western juniper expansion onto range sites. Riparian communities have lost many aspen and willow stands. Reason for these losses include the encroachment of western juniper and exotic weeds as a result of heavy grazing by livestock and wildlife, reduced fire frequency and downstream agricultural practices affecting the hydrologic function of streams.

Special Status Plant Species

Few comprehensive plant inventories have been conducted in the landscape area. Several minor inventories were concentrated in the diatomaceous ash deposits between Harper and Westfall. There are two BLM tracking species listed in the Oregon Natural Heritage Program's guide (1997): the ochre-flowered buckwheat and Malheur cryptantha. A new species of groundsel may have been discovered in 1998 in Mesa Pasture of Allotment #2. No proposed or listed threatened or endangered plant species and no Federal candidate plant species being considered for listing under the Endangered Species Act have been identified.

5.7 Weeds

Although a variety of weeds occur in the landscape area, an extensive inventory has not been conducted to determine the number of species or the extent of weed invasion. Many annual weeds have become naturalized in the landscape area and are beyond the scope of any control effort. Russian and spotted knapweed are the species with the highest priority for control known to occur in the area. Russian knapweed is well established near Hanna Station and Becker Ranch and is radiating along the network of secondary roads. Small isolated sites with spotted knapweed have been found along the road system from Sheep Rock Springs to Puckett Creek and along South Bully Creek Road. Whitetop is considered a low priority noxious weed due to its abundance; however, it is controlled when found in isolated spots within previously non-infested areas. This species is well established in riparian and upland sites at all elevations, especially around ranches and old homesteads. A list of weed species in and surrounding the landscape area is found in Appendix A, Table A-5. Noxious weed management guidelines are found in various environmental documents and statewide strategies (USDI/BLM 1985, 1987, 1989, 1994).

5.8 Fire History and Management

Fire regimes within the landscape area have been largely influenced by weather patterns, available fuel, and the presence of people during the critical fire season. The amount of available fuel is the only factor directly or indirectly impacted by BLM management actions. Management practices, such as wildfire suppression and livestock grazing, change vegetation distribution, composition and structure on both rangeland and forested sites and alter natural fire regimes.

Decreased fire frequency at high elevations in the landscape area has caused conifer encroachment at forest-steppe boundaries and higher tree density in former savanna-like stands of juniper and ponderosa pine. The density of shrubs in mountain big sagebrush communities has increased at the expense of grasses and forbs. Similarly, livestock grazing and reduced fire frequencies at mid-elevations resulted in higher coverage of Wyoming big sagebrush and reduced grasses and forbs in the understory. Western juniper has increased in some of these mid-elevation areas, but at a slower rate due to the reduced available moisture. In contrast, increased fire frequency in low elevations has resulted in the dominance of exotic annual grasses such as cheatgrass.

From 1980 through 1999, four wildland fires have occurred in the landscape area, burning a total of 8,000 acres (Table 3). The fire which burned in 1997 overlapped a portion of the 1989 burn. One prescribed burn was conducted in October, 1983, in the Richie Flat Allotment/North Ridge Pasture, where 360 acres of Wyoming big sagebrush burned in a patchy configuration. Prescribed fires in Rail Canyon Allotment/East Crow Creek Pasture burned 1470 acres of forested, juniper-encroached, mountain big sage and aspen/riparian habitat in 1999.

5.9 Hydrology

Drainages in the upper elevations of the landscape area are characterized by steep mountainous side slopes, narrow canyons and high gradient streams. Low elevations are characterized by rolling hills, broad alluvial bottoms and low gradient streams. Of the 940 estimated perennial, intermittent and ephemeral stream miles in the landscape area, 535 miles (57 percent) occur on public land.

Table 3. Wildland and Prescribed Fires in the Bully Creek Landscape Area, 1980 - 1999

Year	Type of Burn	Acreage	Allotment(s)/Pasture(s) Impacted	Allotment/Pasture #
1983	prescribed	360	Richie Flat/North Ridge	10214/02
	wildland	1,653	Willow Basin/Willow Basin Creek	10222/07
			Willow Basin/Bully Creek	10222/08
			Willow Basin/Fenced Federal Range	10222/11
1989	wildland	2,268	Allotment #2/Wildhorse	10201/04
1990	wildland	1,823	Allotment #2/Mountain	10201/08
			Boston Horse Camp/Boston Horse Camp	00113/01
1997	wildland	2,256	Allotment #2/Wildhorse	10201/04
			Bully Creek/Bully Creek	00132/01
1999	prescribed	1,470	Rail Canyon Allotment/East Crow Creek	10205/05

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1999.

Stream flows, water quality and bank stability have been substantially modified due to a combination of factors such as fire suppression, roads, livestock, wildlife and non-native plant invasions. The lack of riparian vegetation and bank stability prevents stream systems from functioning properly and creates systems that cannot dissipate energy, filter sediment, retain soil-water and/or recharge groundwater. Some streams that are not functioning properly continue to unravel, resulting in increases of water temperatures and soil erosion while decreasing vegetative productivity, habitat and water quality.

Two major peak flows from snowmelt occur between February and April, generally with the first peak flow larger but of shorter duration than the second. There are frequent summer peak flows that occur in direct response to scattered summer storms. Properly functioning streambank vegetation and stream channel characteristics are important in controlling these peak flows. High flows within streams that are not properly functioning can lead to channel incision, bank deterioration, sediment transport and increased peak flows. Many of the streams are incised as a result of the loss of soil, riparian vegetation and stream channel characteristics which have lessened the ability of the floodplain to store water.

Decreased watershed flows during mid-to-late summer can generally be attributed to climatic conditions, historic lowering of the alluvial water tables, irrigation diversions, stream bank deterioration, and removal and continued absence of riparian vegetation. The main limiting

factor for lower summer flows is reduced soil-water storage in alluvial bottoms in the entire system. Reduced storage occurs in all drainages that can be characterized as containing deeply incised stream channels, floodplains and stream terraces which are discontinuous and unstable and where xeric vegetation has encroached upon subirrigated valley bottoms.

5.10 Water Quality

All waters within the landscape area that originate on public land eventually flow through private land before entering the Snake River. The quantity of water generated on public land is limited by annual precipitation, but its utilization and application can be improved by more effective land management practices. Water quality/quantity is expected to improve as upland and riparian ecosystems improve.

As part of meeting the requirements of the Clean Water Act, the State of Oregon produced the 1988 Oregon Statewide Assessment of the Nonpoint Sources of Water Pollution Report (ODEQ 1988). This report identified waters affected by nonpoint source pollution, categories of nonpoint source pollution, the process for identifying BMPs and State and local nonpoint source programs. The report lists stream segments in the Bully Creek area with moderate to severe (based on data or observation) water quality impacts affecting desired beneficial uses (Table 4).

Table 4. Non-point Source Pollution Problems, Probable Causes and Identified Uses

Non-point Source Pollution Problems	Probable Causes	Identified Uses Resulting in Probable Causes
Excessive levels of nutrient loading, turbidity, sediment, and streambank erosion.	-Surface erosion. -Decreased surface permeability.	General Uses: water withdrawal, base flow depletion, reservoir storage, physical alterations of the channel (channelization and/or wetland drainage), pumping of aquifers, bank filling and dredging, and placement of instream structures.
Decreased levels of dissolved oxygen and stream flow.	-Elimination of thermal cover along streams. -Structures on shores and streambanks.	Waste Disposal & Chemical Use: chemical application and irrigation return flows.
Insufficient stream structure.	-Human or animal traffic (roads and trails). -Decline in water table. -Changes in stream flow patterns.	Land Uses: livestock grazing, irrigated agriculture, and residential & commercial construction.

Source : (ODEQ 1998)

As part of fulfilling its requirements with the EPA under Section 303(d) of the Clean Water Act, the State of Oregon has updated its list of “water quality limited” waters. The current (1998) listing of waters that do not meet the State’s water quality standards is based on actual evidence of violation. The following is a list of 303(d) streams in the Bully Creek Landscape Area as determined by ODEQ. Further information on the listing process is available in the draft SEORMP (1998b).

- Bully Creek, Bully Creek Reservoir to Westfall, dissolved oxygen, pH
- Pole Creek, Mouth to Headwaters, temperature

5.11 Wildlife Species and Habitat

Common wildlife species within the landscape area include mule deer, pronghorn, elk, black-tailed jackrabbits, sage grouse, meadow larks, red-tailed hawks and barn swallows. Many species such as black-tailed jackrabbits remain year-long in one area. Others, such as mule deer, elk, sage grouse and pronghorn make seasonal elevation changes in response to weather conditions (Appendix B, Map B-4). Some species, such as barn swallows, breed locally but winter in Central or South America.

BLM’s management of wildlife species focuses on habitat needs and conditions. Many habitat types within the landscape area were severely impacted by historic activities such as livestock grazing, agricultural clearing, reservoirs, roads, and fire management. Some wildlife habitats are still being disrupted or diminished by ongoing activities. When this happens, as is currently the case with diminished winter big game habitat on public land, mule deer and elk move onto private agricultural property, resulting in economic losses to landowners. The BLM works with ODFW, adjoining landowners, livestock permittees and others to maintain or improve habitat for each species. Management objectives for each big game unit have been established by ODFW for mule deer and pronghorn. Herd management objectives for big game species in each grazing allotment are described in the draft SEORMP/EIS, Appendix E (USDI/BLM 1998b) and LAMP Appendix C.

Special Status Animals

Special status animals likely to occur within the landscape area are listed in Appendix A, Table A-6. These species are given priority consideration in BLM management decisions. BLM is required by law to manage land to recover populations of species listed as endangered or threatened and to manage all species to avoid the need for future listing under the Endangered Species Act.

The only Federal candidate that occurs in the basin, the Columbia spotted frog, has been recorded in Rail Canyon, Clover Creek, and South Fork Cottonwood Creek. The frogs inhabit small streams, ponds, reservoirs, and wetlands but require deep perennial pools to overwinter. They are impacted by habitat loss, drought, and the introduction of exotic species, especially fish.

Currently, information on the distribution of Columbia spotted frogs in Bully Basin is limited; further surveys may locate additional populations.

Inland redband trout, a Bureau tracking species of great interest to both anglers and conservationists, is discussed under Fisheries and Aquatic Habitat (5.12).

Bald eagles regularly winter at Bully Creek Reservoir and along the lower sections of Bully Creek. Generally, they require large trees or high cliffs for roosting, a population of either waterfowl or medium-sized fish for food, and freedom from frequent disturbances. Appendix B, Map B-5 shows the location of wintering bald eagle habitat.

Sage Grouse

BLM currently applies the Western States Sage Grouse Guidelines (1974, 1982) to activities that could effect sage grouse habitat. This document is currently being reviewed and updated with a final approval of the new version anticipated this year or in 2001. Until the review is approved BLM is using the 1982 guidelines. There are two other documents being drafted that also may affect BLM policy towards the management of sage grouse habitat: 1) the final SEORMP which contains management criteria and habitat characteristics (Desired Wildlife Habitat Conditions - Appendix F) for sage grouse scheduled for publication in the year 2000 and 2) the "Interim Management Guidelines for Sage Grouse and Sagebrush Ecosystems" for Oregon and Washington set to be finalized and approved in the year 2000.

We reference these draft documents as supporting text for the habitat recommendations made in this LAMP. Appendix B, Map B-5 shows the location of known sage grouse leks within the landscape area.

Due to long-term declines in sage grouse numbers across the West the need for additional Federal protection of this species is being reviewed. Surveys jointly funded by BLM and ODFW document 33 sage grouse leks within or adjacent to the landscape area. Published scientific literature identifies several critical periods during sage grouse life history. Initiation of various management actions within the landscape area should contribute to the improvement of sage grouse habitat and may reduce the future need for listing under the Endangered Species Act.

During the courtship period sage grouse are vulnerable to predators and sensitive to disturbance and the Bureau may adopt a variety of actions to improve conditions at leks. Lek openings can be mechanically maintained where shrubs are encroaching. Tall shrubs immediately adjacent would be retained to provide escape habitat. Other management actions may include prescribed fire or brush beating, rerouting powerlines or fences used by raptors as hunting perches, moving or marking fences that flushed grouse might fly into, cutting nearby trees used by hunting raptors, restricting livestock and recreational users near occupied leks, and rerouting or temporarily closing nearby roads.

Sage grouse in the Bully Creek landscape area are considered to be a resident population because

they are present near leks throughout the year. Female sage grouse in non-migratory populations typically nest within a 2 mile radius around leks, whereas migratory populations nest up to 20 miles from a lek. Many studies have documented the preferred shrub component of nesting sage grouse, but only recently has the importance of the grass/forb community been recognized. Published studies show higher productivity rates for sage grouse nesting in generally tall/thick stands of sagebrush above a tall/thick understory of grass and forbs. Preferred sage grouse nesting habitat is Wyoming or mountain sagebrush community with a canopy coverage between 15-25 percent standing 14 to 31 inches tall over a perennial grass-forb community with canopy coverage of at least 15 percent that stands 7 to 9 inches tall during the nesting season and early brood rearing periods (April to early June). The shrub and herbaceous vegetation provides thermal cover and screens incubating hens and small chicks from avian and terrestrial predators. Bureau actions that might improve conditions may include control of fires that remove sagebrush in nesting areas, and developing grazing systems in cooperation with allottees that would retain sufficient nesting cover of sage grouse. Nesting habitat standards need apply only to those plant communities capable of producing the recommended shrub and herbaceous densities and heights within the nesting radius.

During the early brood rearing period the continued presence of tall herbaceous cover near the nest and abundant forbs and insects for food are critical for chick survival. As grouse chicks mature the grassy riparian communities and wet meadows along an elevational gradient become more important for feeding. These open areas need to be relatively small and to have brushy escape habitat nearby. Brood rearing habitat in the Bully Creek landscape area generally would be improved by several management actions: 1) increasing the forb component in meadows and grassy riparian areas by small prescribed fires or brush beating; 2) seeding forbs in depleted rangelands; 3) changing livestock grazing systems to increase the forb component while maintaining the desired range of plant heights; 4) using prescribed fire or brush beating to create small (0.5 to 5 acre) openings in thick, extensive stands of sagebrush; 5) controlling juniper by methods that retain sagebrush; and/or 6) restricting pesticide applications that reduce insect populations in brood rearing areas. These management prescriptions should center on likely nesting habitat and extend upslope in suitable plant communities including low sage types.

During the winter, large sagebrush stands with canopy densities of 10 to 25 percent that remain at least 10 to 12 inches above maximum snow depths are critical for sage grouse survival. Between storms sage grouse utilize the plant communities within the mid to upper elevation areas of the landscape area. Critical winter habitat requires active management to retain large blocks of tall, dense sagebrush at low elevation, and to insure these areas have minimal human and livestock disturbance at critical times.

In the Bully Creek landscape area winter habitat is not believed to be a limiting factor. In old crested wheat seedings and burned areas the Wyoming and basin big sage sagebrush canopy coverage has naturally increase to levels similar to unmodified habitat. Where sage grouse winter habitat is abundant, management prescriptions that improve habitat for other sagebrush dependent species or for other uses of the public lands may be applied. Small (100-1000 acre) brush beating projects in narrow strips followed by seeding a mix of grasses and forbs may be

appropriate in some low elevation sites. Within locked-in annual rangelands sites, the conversion to a shrub community using a mix of native or desirable exotic grasses and forbs may greatly improve sage grouse habitat. Seasonal restrictions on discretionary actions in critical winter range may be important to improve winter survival of sage grouse and could be prescribed when and where necessary, consistent with SEORMP.

5.12 Fisheries and Aquatic Habitat

Streams, reservoirs and wetlands in the area provide habitat for a diversity of aquatic organisms as well as for fish. Amphibians are especially vulnerable to habitat degradation and can be impacted by loss of riparian vegetation, reduced flows, and the presence of exotic predators such as non-native fish or bullfrogs. Three native amphibians found in this landscape area are listed as sensitive species (Appendix A, Table A-6).

Fisheries habitat includes perennial and intermittent streams and lakes that support fish through at least a portion of the year. There are 940 miles of stream (535 miles occur on public land) and 95 surface acres of reservoir, some of which provides fisheries habitat in the landscape area. Streams across public land provide habitat for eight native fish species and several introduced fishes. In most of these reservoirs, spawning habitat is lacking and natural reproduction does not occur. ODFW no longer routinely stocks warm water fishes, but bass, sunfish, and catfish species have become established in Bully Creek Reservoir and probably in streams near the reservoir.

Current distribution of stream fish in the landscape area is primarily influenced by summer water temperatures and flow levels. Maximum water temperatures are higher in downstream reaches than at the headwaters and cold water species such as redband trout and sculpins are restricted to higher elevations in summer. Several factors may contribute to high stream temperatures: (1) summer flows can be extremely low or intermittent, and low water volumes heat up easily; (2) irrigation diversions can further reduce flow, and water returning from irrigated fields can be warmer than the source stream; and (3) scarcity of riparian canopy increases solar heating. Riparian vegetation not only shades water from hot summer sunlight, but also stores and cools subsurface water by trapping moisture and sediments in its matted root systems.

Bank stability and sediment loads also affect fish distribution. The lack of riparian vegetation has destabilized stream banks, causing accelerated erosion, channel downcutting and increased inputs of sediment. Rapid sediment deposition in Bully Creek Reservoir since its construction in 1963 attests to the high sediment load of basin streams. Fish such as trout and sculpin are intolerant of high sediment levels that bury eggs and suffocate fry.

A fish of special concern in the landscape area is the inland redband trout, the only native game species in Bully Creek basin. During low flow periods, redband trout are found primarily in headwater areas in fragmented populations. Although this rainbow trout subspecies has adapted to warm, arid rangeland streams, high water temperatures in downstream reaches limit its summer distribution. Trout distribution during fall, winter and spring is less fragmented because

higher flows and lower temperatures allow fish to use more stream corridors. During spring it is possible that individuals can move throughout the basin.

Known distribution of redband trout in the Bully Creek basin is based on a single ODFW inventory (Elle 1961) and subsequent observations by biologists. Trout occur in upper Bully Creek, upper Clover Creek, upper West Fork Cottonwood Creek, upper Cottonwood Creek (Allotment #3), Pole Creek (Allotment #3), South Fork Indian Creek, and lower Cottonwood Creek (Allotment #2). Genetic analysis of lower Cottonwood Creek (Allotment #2) and South Fork Indian Creek trout indicates that hybridization with hatchery rainbow trout has occurred in these two populations (Currans 1994). Although most wild trout in Bully Creek basin exhibit the morphological and physiological characteristics of inland redband trout, it is likely that “pure” redband populations no longer exist in the basin.

Hatchery rainbow trout are stocked annually by ODFW into five BLM reservoirs (Allotment #3, Peavine, Pence Spring, South Cottonwood, and South Mountain) and occasionally Bully Creek Reservoir. Rainbow trout have escaped reservoirs and survived to spawn with native redband trout in nearby streams, generating genetically mixed trout populations with varying percentages of hybrid genes. The goal of the stocking program is to provide angler opportunities in mountain reservoirs. Anglers from Vale, Ontario, and Idaho utilize this fishery, and some of the small reservoirs are locally quite popular.

Besides trout, the other cold water-dependent fish species are sculpins. Little is known about their distribution because they are secretive and rarely identified in inventories. Sculpins were found only in upper Cottonwood Creek (Allotment #3) in 1961. Because their habitat requirements are similar to trout, they are likely confined to headwater areas where stream temperatures and sediment loads are lowest.

Other common native fishes in Bully Creek basin include speckled and longnose dace, bridgelip sucker, and redband shiner. These warm water adapted species can tolerate a range of stream temperatures and turbidities. They are abundant in mainstream reaches and streams lower in the basin and overlap with redband trout and sculpin in some headwater areas. Currently, there are no management concerns with these fishes.

5.13 Wild Horses

There are no wild horse herd management areas (HMAs) within the Bully Creek landscape area. Wild horses may wander into the landscape area from the adjacent Hog Creek HMA, but management prescriptions require the horses be returned to the HMA. An appropriate management level has been established for the Hog Creek HMA to ensure public land resources, including wild horse habitat, are maintained in satisfactory, healthy condition, and unacceptable impacts to these resources are minimized. This appropriate management level and associated monitoring and gathering of excess wild horses should also ensure that resource values within the Bully Creek landscape area are unaffected by the wild horse program.

5.14 Grazing Use, Schedules and Existing Rangeland Improvement Projects

Grazing is the predominant land use within the landscape area and is sub-divided into 20 allotments. These allotments are categorized as I (Improve: 9 allotments), M (Maintain: 3 allotments) and C (Custodial: 8 allotments) (Table 5). These categories are designed to concentrate public funds and management efforts on allotments with the most significant resource conflicts and the greatest potential for improvement. *The Ironside Environmental Impact Statement and Rangeland Program Summary* (USDI/BLM 1980a, 1980b, 1982) described proposed grazing systems for all I and M allotments. These systems were developed and implemented through an AMP and subsequent permit or lease, in coordination with permittees and other concerned parties. Existing AMPs not only describe a grazing schedule, but specify allotment or pasture specific objectives and any rangeland improvement projects necessary to fully implement the AMP to meet resource management objectives.

Past Malheur Resource Area (MRA) planning decisions or agreements have excluded livestock from grazing on public land when or where the specific purpose is for the of protection of a resource values or facilities from livestock impacts. Examples include, but are not limited to, identified riparian vegetation communities adjacent to streams, reservoirs, springs, and wetlands, developed water sources, special status species habitat, Areas of Critical Environmental Concerns (ACECs), recreation sites, archaeological sites, research and study plots, and administrative sites. The following exclusion areas are located within the Bully Creek landscape area: (the “No Data” entries need future management identified with options including maintaining them as exclusion areas or dropping them with recommendations for new management)

Allotment #2 (the following two exclusion areas and part of North NG Seeding have been combined into the Locke Pasture):

- Cottonwood Wildlife Stream Exclosure- 497 Acres
- 0201 Riparian Stream Exclosure - 446 Acres
- Part of North NG Seeding-

Allotment #3 :

- N. Black Canyon Pasture - Pence Spring Fence Exclosure - 2 Acres
- Indian Creek Pasture - South Fork Indian Creek Spring Exclosure - No Data
- W. Cottonwood Seeding - Allotment #3 Reservoir Exclosure - 11 Acres
- Indian Creek Pasture - Zotto Reservoir Exclosure - 38 Acres.

Richie Flat Allotment:

- E. Log Creek Pasture - Reds Creek 3-Way Upland Exclosure - 2 Acres

Table 5. Grazing Allotments and Other Land Ownership

Allotment Number	Allotment Name	Number of Pastures	Category ¹	Acres PL ²	Acres PV ³	Acres BR ⁴	Acres ST ⁵	Total Acres
00113	Boston Horse Camp	1	C	707	1,420			2,127
00132	Bully Creek	1	M	5,095	7,281	483		12,859
00134	Juniper Mountain	1	C	788	2,262			3,050
00144	Cow Creek	1	C	2,851	4,766			7,617
00227	Westfall	1	M	1,673	4,943			6,616
00228	Scratch Post Butte	1	C	1,012	8,542		158	9,712
00244	Post Creek Individual	1	C	816	4,292			5,108
10140	Cottonwood Creek	1	I	738	623			1,361
10141	Ferriers Gulch	1	C	354	4,232			4,586
10201	Allotment #2	20*	I	48,500	7,665	371		56,536
10202	Allotment #3	30*	I	77,694	15,117		94	92,905
10205	Rail Canyon	10	I	22,639	3,879			26,518
10210	Clover Creek Ind	1	C	3,459	12,937			16,396
10213	West Clover Creek	1	C	2,713	7,520			10,233
10214	Richie Flat	7	I	17,506	2,233			19,739
10215	Brian Creek	4*	I	4,817	91			4,908
10218	Buckbrush	8*	I	20,067	949			21,016
10222	Willow Basin	11*	I	43,455	6,542			49,997
10223	Lava Ridge	6*	I	11,069	1,224			12,293
20104	West Bench	2	M	626				626
	Acreage outside allotments			2,244	19,273		618	22,135

Allotment Number	Allotment Name	Number of Pastures	Category ¹	Acres PL ²	Acres PV ³	Acres BR ⁴	Acres ST ⁵	Total Acres
Totals:	20 Allotments	109		268,823	115,791	854	870	386,338

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.

Notes:

¹ Category of allotment management - C (Custodial), I (Improve), M (Maintain)

² Public land

³ Private land

⁴ Bureau of Reclamation land

⁵ State land

*Pasture division fences have been proposed in these allotments.

Data collected during the 1998 field season, along with historic data, were used to describe the existing condition of the 20 grazing allotments and their pastures (Appendix C). Grazing systems have been developed for 70 of the 109 pastures within the 20 allotments. The remaining 39 pastures are either exclosures that are not grazed, fenced federal range, or pastures in custodial allotments that are grazed in conjunction with private land. A listing of all existing rangeland improvement projects is contained in Appendix A, Table A-8. The allotments and pastures are illustrated in Appendix B, Map B-6.

5.15 Recreation and Visual Resources

Within the landscape area dispersed hunting and associated motorized vehicle-supported camping are the primary recreational activities. Habitat types support wildlife populations which receive some of the greatest hunting pressures within the MRA. There are no developed recreation facilities on public land. Other recreational activities include driving for leisure, photography, wildlife observation, and rockhounding. Much of the nominal recreational off-road vehicle driving is incidental to hunting activities. ODFW big game data are on file at the BLM Vale District Office to support estimates of recreation levels on public land within the area. Average summer and winter herd management objectives were provided by ODFW for the allotments (Appendix C).

The Federal Land Policy and Management Act (FLPMA) of 1976 requires the BLM to consider the effects of management actions on the visual quality of the landscape. Public land is inventoried and assigned a Visual Resource Management (VRM) class according to the relative value of the visual resources. To maintain the management objective of a VRM class, the BLM's visual contrast rating system is employed for proposed individual projects and activities to analyze and mitigate visual impacts to the existing landscape. The upper- and lower-most reaches of the landscape area have the highest levels of visual sensitivity. The Beaver Dam Creek Wilderness Study Area (WSA) and South Fork Indian Creek study stream for the Wild and

Scenic River System (WSRS) (USDI/BLM 1998b) are currently classified as VRM Class II. The remainder of the landscape area is classified as VRM Classes III or IV.

5.16 Special Management Areas

Wilderness Study Area

Nearly 18,480 acres of the 19,580-acre Beaver Dam Creek WSA (OR-3-27) lies in the western portion of the landscape area while the remaining acreage extends west of the landscape area boundary (Appendix B, Map B-7). This area was designated a WSA by the BLM in 1980 as a result of a Congressionally mandated wilderness review program. Until Congress decides to designate Beaver Dam Creek as a Wilderness Area or release all or a portion of the WSA, BLM manages the WSA in accordance with the agency's Interim Management Policy for Land Under Wilderness Review (IMP, USDI/BLM 1995) so as not to impair its suitability for preservation as wilderness. If designated a Wilderness Area, the primary and secondary wilderness values of the WSA will be preserved and protected. These values include naturalness, outstanding opportunities for solitude, primitive and unconfined recreation, juniper steppe woodland areas, a variety of vegetative communities, and certain non-game and game species. Within the landscape area, portions of three grazing allotments overlap the WSA (Table 6). Under current BLM management direction, livestock grazing would continue in a WSA or Wilderness Area. Existing rangeland improvements within the WSA include livestock fencing, four developed springs, and one reservoir. Motorized equipment is permitted for maintenance of developed springs and the reservoir within the WSA if determined by BLM to be the minimum tool necessary to accomplish the work. Additional and more specific information regarding the Beaver Dam Creek WSA can be found in the following documents: *Oregon Wilderness Final Environmental Impact Statement* (USDI/BLM 1989) and *Oregon Wilderness Study Report* (USDI/BLM 1991).

Areas of Critical Environmental Concern

Within the landscape area, two areas have been identified as potential Areas of Critical Environmental Concern/Research Natural Areas (ACECs/RNAs) and described in the draft SEORMP/EIS (USDI/BLM 1998b) (Appendix B, Map B-7). North Ridge Bully Creek ACEC/RNA would include 1,569 acres (Draft SEORMP/EIS, Alternative C) in the Richie Flat Allotment/North Ridge Pasture. The relevant and important values for which the ACEC has been proposed are the excellent representations of a big sagebrush/Thurber needlegrass community, big sagebrush/threetip sagebrush/Idaho fescue community and sage grouse and their associated habitat. South Ridge Bully Creek ACEC/RNA would include 620 acres (Draft SEORMP/EIS, Alternative C) predominantly in the Richie Flat Allotment/South Ridge Pasture. The relevant and important values for which the ACEC/RNA has been proposed are the excellent representations of a big sagebrush/Thurber needlegrass community, big sagebrush/squaw apple/Idaho fescue community and the associated habitats for sage grouse and loggerhead shrikes.

Table 6. Grazing Allotments Associated with the Beaver Dam Creek WSA

Allotment/Pasture	Allotments/Pastures Associated with the WSA (Acres)			Public Land Acreage of WSA by Allotment/ Pasture
	PL ¹	PV ²	Total	
Rail Canyon	22,639	3,879	26,518	6,975
Lost Creek FFR	824	1,605	2,429	394
Kitten Canyon	6,115	78	6,193	4,872
West Chastain	3,019	628	3,647	1,709
West Clover Creek				
West Clover	2,713	7,520	10,233	394
Willow Basin	43,455	6,542	49,997	11,109
Willow Basin	9,005	86	9,091	1,622
Bully Creek	10,015	1,026	11,041	8,366
FFR (09)	2,751	2787	5,538	57
FFR (11)	1,104	983	2,087	1,064

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.

Notes: ¹ PL - public land

² PV - private

Wild and Scenic River System (WSRS)

There are no designated components of the national WSRS within the landscape area. BLM has determined a 2 mile study segment of South Fork Indian Creek is eligible for possible inclusion in the WSRS with a tentative river classification of wild. The suitability evaluation of this stream segment for possible designation is currently being conducted in the Draft SEORMP/EIS (USDI/BLM 1998b) which describes the segment as non-suitable under Alternative C. Additional information can be found in case files at the BLM Vale District Office.

5.17 Socio-Economic Values

Public land in the landscape area is managed for a wide array of social and economic benefits at the local, regional and national levels. These benefits include livestock forage, water production/storage/transport, recreation and aesthetic values and many others. Because of the diversity of values people hold for public land resources, the distribution of resources may seem inequitable to certain groups and individuals. It may be assumed that local people in or near the landscape area are more likely to use water from these public lands and hunt, fish, or hold a grazing permit than those living outside the area. However, BLM is required to consider the views of all citizens during resource allocations.

Figures reported by the Oregon Employment Department (1999) show that Malheur County is one of the largest producers of cattle and calves in the State of Oregon (13% of state total), and on a National level ranks 39th in its inventory of cattle and calves and 69th in the number of cattle and calves sold (OED 1999). Within the landscape area, livestock forage has a high economic value. The landscape area includes 20 grazing allotments and produce forage supporting 42,366 animal unit months (AUMs) of active use and 5,000 AUMs of suspended use. As of 1994, the active AUMs supported 3.6 percent or approximately 6,120 beef cattle of the estimated 170,000 beef cattle in Malheur County (USDI/BLM 1998b). Approximately \$58 million generated from the livestock industry in Malheur County an estimated \$1.9 million comes from the Bully Creek Landscape Area.

In the Bully Creek Landscape area, 13 operators permitted to graze livestock have a total of 42,366 active AUMs allocated. Within the Malheur Resource Area, 233,607 AUMs are allocated to 152 operators. Therefore, any changes to public land use could effect 8.5% of the operators and 18% of the active AUMs in the Malheur Resource Area. The Bully Creek LAMP is not proposing any initial reductions in AUMs and as a result little or no impact is expected to the economic value of the livestock industry in Malheur County. However additional expenses may be incurred by individual livestock operators in the Bully Creek landscape area by hiring temporary riders for herding purposes, adding supplements, sharing in the cost of range improvement projects and additional fence maintenance to ensure utilization levels are not exceeded. On the other hand, a slight economic benefit may be realized with implementation of the LAMP. Project development may invest an estimated \$500,000 into the Bully Creek area between 1999 and 2009 (Table 9).

Water production, storage and transport are important functions of the landscape area for ecosystem health and for local water users with an average of 38,800 acre-feet of water produced per year (BCWC et al. 1997). Within the LAMP area, public land comprises about 70 percent (268,800 acres of the total 386,300 acres) of the land mass and a corresponding amount of the water generated each year. Several thousand acres of irrigated farm and pasture land are located in the landscape area and are supported by flood irrigation, wells or small reservoirs.

Recreation opportunities (hunting, fishing, dispersed camping and various other day-use activities) are important locally and regionally. These kinds of recreational opportunities are not unique to the Bully Creek landscape area although the area provides a relatively uncrowded place to enjoy them. The primary users come from local communities but regional visitors, especially those from the Boise area and the Willamette Valley, are increasing.

5.18 Cultural Resources

Prehistoric

The Native people of the Northern Great Basin practiced their ancestral lifeways into the 19th century and were heirs to an extremely ancient cultural tradition. Their technology was effective

and efficient, utilizing many multi-functional, light-weight and expendable tools. Gathering activities are attested to by digging sticks, carrying baskets, and milling stones, and hunting is represented by the atlatl and dart, bow and arrow, stone projectile points, stone knives and scrapers. Cultural resources associated with the prehistoric use of this project area consists of rock art; rock shelters; rock structures (cairns, alignments, etc.); habitation sites around springs; small camps at stream-side meadows and on alluvial deposits at junctions of tributary streams; quarries of fine-grained basalt, obsidian, chalcedony and jasper; flaking stations on high points with good vantage; and sacred sites.

Historic

Cultural resources associated with the historic use of this area are tied to landforms as transportation corridors: wagon roads, historic homesteads, early irrigation project features, early mining activity areas, and remains of stage and telegraph stations. Exploration into this area by white Europeans began in the early 1830's. In 1845, Stephen Meek guided a train of 214 wagons up the Malheur River into central Oregon. The route of Meek's Cutoff crosses through the landscape area, heading west from Vale to Harper, then north to Westfall and continuing westward. When miners searching for gold in the area were unsuccessful, they turned to farming and livestock production, particularly in the lower valleys, grassy hills and the many drainages that eventually flowed into the Malheur River. The Ontario to Burns Freight Road, in operation from 1844-1913, crossed through the landscape area going northwest out of Westfall. Hanna Stage Station is located on this road.

In 1872, the Malheur Indian Reservation was established at Fort Harney. Originally the reservation covered 1,778,560 acres and contained grazing land. The western half of the landscape area is located within the old treaty boundaries of this reservation. Since 1883, all of these land, except 320 acres on which the old military post of Camp Harney stood, were restored to public land.

During the 1880's, small communities were established near reliable water sources, and during the 1890's, production of both cattle and sheep prospered. A rapid increase in population occurred in the northern part of Malheur County between 1930 and 1950 as a result of the development of the Vale and Owyhee Irrigation projects.

5.19 Paleontology

At present, there are no identified locations of fossil flora or fauna within the landscape area. However, the exploration for fossil localities has been limited, and would probably be confined to Pliocene, Miocene or Pleistocene age soils. Sediments associated with old lake beds may contain plant, fish or other marine animal remains since they have been located in similar old lake sediments at Beulah Reservoir and south of Vale.

5.20 Access

In general, all roads across public land in the landscape area are open to travel by the public unless they are closed specifically for management purposes or during an emergency (Appendix B, Map B-3). There are no Interstate highways located within the landscape area.

Approximately 3 miles of U.S. Highway 20 forms the southern boundary of a portion of the landscape area. Over 20 roads across public and private land in the landscape area have been assigned a name and number by Malheur County (Oregon State Highway Division, 1973).

The BLM Vale District currently holds 9 easements on portions of roads located on private land in the LAMP area. This represents one-third of all BLM road easements in Malheur County. Two of these roads are open to public access, while the other seven are for administrative access only. The Access subsection of the Land and Realty section of the draft SEORMP indicates that road easements are normally acquired to provide administrative access to facilitate management (Chapter 2-92). The provision of public access is listed as another purpose to acquire access easements. Critical access needs, which have been identified by the public and various government agencies, include several locations within the landscape area (USDI/BLM 1998b, Map-Land-1). A transportation management plan would be developed to guide and direct future transportation management decisions (USDI/BLM 1998b).

Section 6.0

Data Collection and Analysis

In order to formulate management recommendations about current resource conditions, a variety of information was collected across the Bully Creek landscape area in the summer of 1998. This information was combined with and compared to previously collected data to determine vegetative health trends, identify locations of specific resource problems, and lead to management actions that would achieve the goals and objectives of the LAMP.

Allotment evaluations were one source of information. In many cases one or more allotment evaluations have been conducted for all I and M allotments. After each allotment evaluation, grazing management changes were implemented where feasible or necessary to solve identified resource problems. The most recent evaluations for the following allotments were:

- 1987: Brian Creek
- 1989: Bully Creek
- 1991: Lava Ridge
- 1993: West Bench, Allotment #3
- 1994: Allotment #2, Richie Flat
- 1995: Rail Canyon, Cottonwood Creek, Buckbrush, Westfall, Willow Basin

6.1 Data Collection

For upland pastures, including crested wheatgrass seedings, the dates of use and numbers of livestock grazed (actual use) have been collected for many years. Utilization of key forage grasses, including bluebunch wheatgrass, Thurber needlegrass, Idaho fescue, and crested wheatgrass has been evaluated yearly in most pastures following livestock removal. At least one permanent trend plot, consisting of a 3' x 3' photo plot, a 100' line intercept study (basal area cover of grasses, canopy cover of shrubs) and several photographic stations were established in the early 1970's in most upland pastures. These 36 plots were read in 1998, many for the third or fourth time. From these data trends could be determined and evaluated in view of objectives over the short-term (since the last reading) and the long-term (since the first reading). Professional judgment, consisting of an assessment by specialists familiar with the area, was also used to evaluate upland trend. In addition, uplands were assessed for overall physical and biotic functioning using the SRH indicators (Standards 1 and 3).

Nearly all riparian areas were assessed using the guidelines for riparian PFC (USDI/BLM 1993) (Standard 2). Portions of many streams in the landscape area have been photographed using low level aerial color infrared or true color photography. Some streams have more than one year of aerial photo coverage that was used in determining riparian trend. Ground photo points at key

riparian locations were rephotographed on streams that have been studied before or established in newly identified riparian areas. Riparian trend was determined by comparing aerial photos, ground photo points and professional judgment.

Water quality (Standard 4) was addressed through all of the SRH indicators. Water quality is both directly and indirectly related to the watershed function of uplands (Standard 1), function of riparian areas (Standard 2), ecological processes of uplands (Standard 3), and wildlife habitats (Standard 5). Improvements in the SRH will benefit water quality. The assessment of Standard 4 was determined by evaluating whether or not the factors which contributed to a rating of not properly functioning for Standards 1, 2, 3 and 5 were affecting water quality.

Upland conditions for wildlife values were assessed using the SRH indicator (Standard 5). Inventories have been conducted over many years to locate sage grouse leks. ODFW provided information regarding big game species winter ranges. Big game and special status species were noted when observed during assessments of SRH, and in-house records were incorporated.

6.2 Results of Data Analysis

An interdisciplinary team evaluated the available data to monitor resource response to management actions on a pasture and allotment basis. The summaries of trend findings, SRH assessments for Standards 1, 2, 3, 4 and 5, and other issues of concern (e.g., noxious weeds, juniper encroachment) for each allotment and pasture are found in Appendix C. For all SRH which fail to meet minimum criteria the current contribution of livestock was identified and is displayed on the Allotment Data Summary Tables in Appendix C. An assessment was also made of the effectiveness of management actions implemented since the last allotment evaluation.

The evaluation of the 36 upland vegetation trend plots, excluding the crested wheatgrass seedings, showed that 22 pastures are moving toward meeting the current upland management objectives, and 14 were not. With the exception of Richie Flat, which uniformly shows upward trends, every allotment contained pastures showing both upward trends and trends failing to meet upland management objectives. Allotment and pasture-specific summaries of trend are provided in Appendix C.

There are 16 seeded areas in the landscape area. Most have lost significant amounts of crested wheatgrass basal area cover since the early 1980's. In many of these seedings there has been a corresponding increase in sagebrush canopy cover in this same period of time, resulting in a decreasing long-term trend. However, short-term trends indicate that crested wheatgrass cover has stabilized at a new low or is now slightly increasing in nine of the pastures, while continuing to decline in five. Only two seeded pastures, those in the Richie Flat Allotment, showed strong upward trends in crested wheatgrass cover with declining or modest gains in sagebrush cover over the long-term. The increased shrub component in many of these seedings has enhanced their value for wildlife. Pasture-specific summaries are provided in Appendix C.

An evaluation of the actual use and utilization adjusted for climate show that the carrying capacity of most allotments is within the range of authorized use.

The analysis of the data for Standard 1 (upland watershed function) of SRH, revealed that of the 109 total pastures, 20 pastures in 6 allotments showed deficiencies at 40-75 percent of the assessed sites and were not meeting the standard. The remaining 89 pastures are meeting Standard 1 and would continue to move towards DRFC under current grazing management practices.

For Standard 2 (riparian watershed function), a total of 56 pastures out of 109 in all allotments were identified as having riparian resources in 1998. Prior to 1998, 12 pastures had been identified as having riparian resources and during the course of the 1998 evaluations, 44 new riparian areas were identified (Appendix B, Map B-8). Forty seven of the 56 total pastures were evaluated as not meeting Standard 2. Twenty-two of the 47 pastures did not meet this standard as a result of current grazing management practices while the remaining 25 pastures did not meet standards due to other factors.

The assessment of trend for Standard 2 on the 210 miles of stream riparian vegetation communities adjacent to perennial and intermittent streams identified 48 miles (23 percent) of the stream reaches to be properly functioning and 49 miles (23 percent) to be FARU (functioning at risk-upward trend). Portions of 57 miles (27 percent) of the stream reaches were FARN (functioning at risk-not apparent trend). Thirty-five miles (17 percent) were FARD (functioning at risk-downward trend) and the remaining 21 miles (10 percent) of stream reaches were NF (non-functional). The NF sections of streams are predominantly concentrated around a stream system in Allotment #3.

Twenty of the 109 pastures contained an aspen resource. Information of the relative health of the aspen stands was collected during the riparian inventory for Standard 2 as well as by using ground photos, low level aerial photography and monitoring conducted for previous allotment evaluations. Aspen stands occur or did occur (based on the presence of dead trees) along mid to high elevation riparian areas. The health of the stands generally refers to the age class structure of the community. Aspen stands comprised of only large, mature aspen with many dead branches and few root suckers, all of which were heavily browsed, were considered to be indications of decline or downward trend. Heavy utilization on the few reproductive shoots produced in these stands was observed at numerous sites. Several aspen stands were observed where all age classes were present, with vigorous top branches, light to no browsing of root sprouts and a thick herbaceous understory. Aspen stands with these characteristics are considered to be “healthy”. The majority of the aspen stands within the landscape area are declining in health and in a downward trend. Browsing by elk, as well as livestock, have major impacts on aspen in some of the riparian areas where browsing has focused on young aspen.

For Standard 3 (ecological processes), four allotments (Allotment #2, Brian Creek, Buckbrush and Lava Ridge) showed deficiencies at more than 40 percent of the sites assessed. All allotments except Bully Creek and Cottonwood Creek showed deficiencies at one or more of the

sites assessed for this standard.

For Standard 4 (water quality), two stream segments have been identified as having deficiencies within the landscape area. These stream segments are Bully Creek from Westfall to the Bully Creek Reservoir and Pole Creek from the mouth to the headwaters (ODEQ 1988) Section 5.10 (Water Quality) and Table 4 in the LAMP also describes in more detail the reasons of these listings and some probable causes for the non-point source pollution. These deficiencies impact the beneficial uses determined for this area, specifically water quality, fisheries, aquatic habitat, and water contact recreation. Long-term water quality data are sparse for the entire landscape area. Although water quality impacts have been identified for only these two stream segments, other streams in the landscape area exhibit all or many of the same non-point source pollution problems.

For Standard 5 (native, T&E, locally important species), 32 out of the 109 pastures were identified as not meeting the standard. Eight pastures in 4 allotments (Allotment #3, Brian Creek, Willow Basin, and Lava Ridge) were not meeting the standard due to current grazing management practices. The remaining 24 pastures located in the previously mentioned 4 allotments plus Bully Creek, Cottonwood Creek, Allotment #2, Rail Canyon, Richie Flat and Buckbrush were not meeting the standard due to other factors. Five of the 32 pastures did not meet standards due to both current grazing management practices and other factors. In most of the crested wheatgrass seedings, a loss of forbs and an increase of annual grasses and weeds has rendered the rangelands deficient to meet the needs of numerous wildlife species, particularly at low elevations. Other common problems were the increase of juniper in sage grouse habitat and poor reproduction or declines in bitterbrush and/or squaw apple communities important to loggerhead shrikes and mule deer.

In all pastures where SRH were not met, the data were assessed to determine the cause(s) of non-attainment. Results of that assessment are found in Appendix C of the LAMP.

6.3 Coordination and Cooperation

Public involvement was an ongoing process which occurred prior to and during the development of the LAMP. Scoping was conducted prior to development of the LAMP to determine issues and help develop objectives and included mailings, news releases and public meetings. Public meetings, mailings and news releases were utilized to keep all parties involved and informed during data collection and development of the LAMP.

All livestock permittees within the LAMP area were invited to participate with data collection during the 1998 field season. Following initial data analysis, permittees in the landscape area had the opportunity to review data and photographs specific to their allotments. Their experience, observations and recommendations frequently aided in data interpretation and the development of project proposals and the proposed grazing systems. A Draft LAMP and EA was published and distributed in June, 1999, followed by a 45 day public comment period. Written

responses to public comments were published in February, 2000 and are included as Appendix E: Responses to Public Comments.

Section 7.0

Recommendation and Implementation

7.1 Recommendations

Recommendations (proposed decisions and new management prescriptions) are designed to resolve problems identified in Appendix C and to move resource conditions towards the defined goals, objectives and DRFCs. Department of Interior regulations require changes in livestock management when current grazing practices are found to be responsible for non-attainment of Rangeland Health Standards. Since these changes must be implemented prior to the next grazing year they have a higher priority for implementations than actions to resolve resource conflicts caused by other factors. Initially, BLM proposes changes in livestock season and duration of use, rather than changes in livestock numbers (Table 7 and Appendix C for pasture specific prescriptions). Where changes in season and duration of use do not, of themselves, resolve Rangeland Health issues adjustments will be made as per Table 7 which include a wide variety of options from land management actions to reduction or suspension of AUMs.

BLM uses many types of management activities to facilitate uses of the public lands, resolve conflicts and protect important resources (Table 7). Standardized projects and implementation techniques have all been previously described and their impacts analyzed in existing planning documents (USDI/BLM 1980a, 1980b, 1982, 1988b). These types of proposed projects and other actions comprise resource management options available to BLM, livestock operators and others to assist in restoring and maintaining the desired ecosystem functions. These general techniques are applied in specific pastures (Appendix A, Table A-8) to eliminate or reduce resource impacts that grazing prescriptions alone would not resolve.

Several major constraints emerged in the past few years that also guided the design of grazing systems and new projects. Where riparian vegetation is present in a pasture, livestock grazing during the hot season is deferred some years and potential indicators of resource damage are identified such as utilization limits. Hot season grazing limits in riparian areas are designed to protect streambanks, channel structure and to insure sufficient vegetation is present for other uses of the public lands. Livestock grazing generally occurs in a patchy pattern and the amount of use will be evaluated across a large, rather than small portion of riparian areas. Before riparian values suffer damage from grazing, management action(s) including herding, temporary or permanent fencing, providing alternate water sources or early removal of livestock from that pasture will be implemented.

Table 7. Management Actions- Benefitting Issues and Objectives

Management Action	Rationale/Indicators for Potential Resource Damage	Benefitting Issues/Objectives
General Land Management Actions		
Best Management Practices	These practices include road design and maintenance, existing project maintenance, surface-disturbing activities, rights-of-way and utility corridors, forest management, fire suppression, prescribed burning, mining, wildlife habitat protection, noxious weed management, developed recreation. ¹	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation
Mechanical Control-Sagebrush	Maintains composition, structure, diversity and productivity of upland vegetation ²	Water Quality/Quantity, Vegetation (upland native and seedings), Weeds, Wildlife Habitat
Mechanical Control-Juniper	Minimizes juniper encroachment while improving/maintaining soil stability and vegetative diversity. ²	Water Quality/Quantity, Vegetation (upland native), Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment
Seedings-Native	Reestablishes native vegetation and diversity. ²	Water Quality/Quantity, Vegetation (upland native), Weeds, Wildlife Habitat
Seedings-Non-native	Provides forage for livestock while diverting use away from native range. ²	Water Quality/Quantity, Vegetation (upland native and seedings), Weeds, Wildlife Habitat
Seedings/Plantings-Forbs/Shrubs	Increases vegetative composition, structure, diversity and productivity. ²	Water Quality/Quantity, Vegetation (upland native and seedings), Riparian/Wetland Areas, Weeds, Wildlife Habitat
Prescribed Burns- Sagebrush	Increases vegetative composition, structure, diversity and productivity. ²	Vegetation (upland native and seedings), Weeds, Wildlife Habitat
Prescribed Burns-Juniper	Minimizes juniper encroachment while improving/maintaining soil stability and vegetative diversity. ²	Water Quality/Quantity, Vegetation (upland native), Riparian/Wetland Areas, Wildlife Habitat, Juniper Encroachment
Prescribe Burns- Annual Rangelands/Seedings	Removes annual grasses prior to revegetation; rejuvenates seedings. ²	Water Quality/Quantity, Vegetation (upland native), Weeds
Prescribed Burns-Aspen	Rejuvenates/regenerates dead and dying aspen stands. ²	Water Quality/Quantity, Vegetation (upland native), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Wildlife Habitat, Juniper Encroachment, Recreation

Management Action	Rationale/Indicators for Potential Resource Damage	Benefitting Issues/Objectives
Prescribed Burns-Forest	Reduces stocking density, fuels and undesirable species (juniper); maintains forest health. ²	Water Quality/Quantity, Vegetation (upland native), Riparian/Wetland Areas, Wildlife Habitat, Juniper Encroachment, Recreation
Water Developments	These include reservoirs, spring developments, in-stream entrapments, wells, pipelines, and wildlife guzzlers. Improves livestock distribution and reduces grazing pressure from riparian habitats as well as providing alternative water sources for wildlife. ²	Water quality/quantity, Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Wildlife Habitat
Weed Control	Prevents spread of noxious weeds	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat

Grazing Management Actions

Manage Intensity of Grazing	Duration, numbers, season-of-use and other factors determine the intensity of grazing and its impacts. To address resource improvement, intensity of grazing (assessed through monitoring) will be the key to making adjustments in management. ³	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation
Range Readiness Limitations	Guidelines in Table 8. Livestock grazing can be adjusted to result in minimal impacts on the growth cycle of key plant species, many wildlife species, physical condition of resources and other factors. ³	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat
Reduced, Increased, Suspended or Restored AUMs	Based upon resource condition and trend, as evaluated through SRH (USDI/BLM 1997) and other techniques, AUMs may be reduced, increased, suspended or restored. ⁴	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation
Allotment Category Changes: I, M and C Allotments	If previously unknown resource concerns are discovered in an allotment, the allotment category can be changed to focus management to resolve existing or potential impacts. ⁵	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation
Fenced Federal Range (FFR) Management	These are non-intensive management areas or custodial pastures where BLM does not specify livestock numbers, kinds of animals and period of use provided that detrimental impacts do not occur to public land. FFR areas consist of small tracts of public land that intermingle with large tracts on private land. Capability for grazing management is limited and little public resource values exist. ⁶	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation

Management Action	Rationale/Indicators for Potential Resource Damage	Benefitting Issues/Objectives
Public/Private Land Grazing Systems Cooperation	Operators often graze adjoining private land in sequence with public land. Where cooperation is possible, and resource condition is known, consider incorporating private land into a grazing system.	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat, Juniper Encroachment, Recreation
Periodic Grazing Deferment or Rest Rotation	Ensures improvement and/or maintenance of desirable vegetation. ³	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat
Limit utilization on native uplands	Indicator for potential resource damage on native uplands is >50% utilization. This maintains or improves upland native vegetation conditions, and can help seedings to improve condition.	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat
Limit utilization on seedings	Indicators for potential resource damage on seedings with static or upward trends is >60% utilization and on seedings with downward trend is >50% utilization. The 50% utilization guideline includes all ungulates. This is to maintain or improve seeding condition.	Vegetation (seedings), Weeds
Limit utilization during hot and late seasons on riparian areas ⁷	Indicators for potential resource damage are <4-6" residual herbaceous vegetation and >30% incidence of use on woody species. Retain streambank cover for summer storm events, bank stability, sediment retention, and thermal cover. Minimize livestock grazing impacts on riparian areas and ensures improvement and/or maintenance of riparian vegetation.	Water quality/quantity, Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat
Limit utilization in sage grouse habitat in April and May	Indicators for potential resource damage include <7-9" residual herbaceous vegetation after grazing or >40% utilization levels within two miles of known sage grouse leks in key nesting habitat. Maintain or improve critical habitat component for sage grouse nesting.	Water quality/quantity, Vegetation (upland native), Riparian/Wetland Areas, Weeds, Wildlife Habitat
Avoid livestock use from December-March in critical deer/pronghorn/sage grouse winter range	Leaves critical habitat component for deer/antelope winter range.	Vegetation (upland native and seedings), Weeds, Wildlife Habitat, Recreation
Pasture Fences	Improves livestock distribution and protects sensitive resource values. ²	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Weeds, Wildlife Habitat
Exclosure Fences	Protects sensitive resource values. ²	Water quality/quantity, Vegetation (upland native), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Wildlife Habitat, Recreation

Management Action	Rationale/Indicators for Potential Resource Damage	Benefitting Issues/Objectives
Fence Removal	Improves livestock distribution and protects sensitive resource values. ²	Water quality/quantity, Vegetation (upland native and seedings), Fisheries/Aquatic Habitat, Riparian/Wetland Areas, Wildlife Habitat

Source : Malheur Resource Area Interdisciplinary Team, Vale BLM District, 1998.

¹ Appendix O, Draft SEORMP/EIS (USDI/BLM 1998b)

² Appendix S, draft SEORMP/EIS (USDI/BLM 1998b)

³ Appendix R, draft SEORMP/EIS (USDI/BLM 1998b)

⁴ Grazing Regulations; Standards for Rangeland Health (USDI/BLM 1997)

⁵ BLM policy

⁶ Ironside EIS (USDI/BLM 1980b)

⁷ Depending on elevation, hot season grazing typically runs from July 1 to September 30 and late season grazing typically runs from September 30 to October 31.

Note: At a minimum, utilization is measured at the end of the growing season or season of use. Utilization is ideally measured during livestock grazing in appropriate pastures to ensure that standards are met.

In upland pastures not meeting Standards of Rangeland Health, periodic deferment or rest from grazing has been prescribed to promote healthy systems. In addition, indicators of potential resource damage have been established for sage grouse nesting and early brood rearing habitat based on the Interim Guidelines for Sage Grouse and Sagebrush Steppe Ecosystems (Oregon BLM, March 2000). Livestock use will be managed for the existing light utilization level (20-40 percent) in all other pastures as measured by the key forage plant method because the sage grouse population is considered locally healthy (Walt VanDyke, ODFW 1999 & 2000 pers. com.). Because of sage grouse lek density, all pastures in mid to upper elevations are within a 2 mile radius of one or more leks with the exception of nine pastures: East and West Crow Creek, Lost Creek, South Studhorse, Kelsey Butte, Upper and Lower Pole Creek and Allotment #3's Indian Creek, Ferriers and Juniper. These nine pastures may not be suitable for sage grouse nesting at this time because of moderate to severe juniper encroachment issues or because they contain small parcels of public lands. BLM will initiate studies to correlate the ongoing utilization studies to new measurements taken in potential nesting habitat as directed in the Interim Guidelines. The average height and density of residual herbaceous vegetation and big sagebrush plants will be measured in big sagebrush communities at various distances from sage grouse leks with the objective of retaining 80% of potential nesting and early brood rearing habitat in desirable conditions. Utilization limits established for riparian areas will maintain quality sage grouse foraging habitat in wet meadows and stream-side areas during the late brood rearing period.

BLM identified many pastures where the non-attainment of SRH was caused by land uses, natural processes and previous management actions not related to current grazing systems. Resolution of these factors will also occur using techniques identified in Table 7, but are not subject to a pending deadline of the next grazing year. Projects included in Appendix A, Table A-8, are those necessary to implement or to make effective the proposed changes in grazing systems. Other projects have a lower priority for implementation. Livestock management project maintenance is an agency requirement prior to livestock turnout.

Project Prioritization

Priority for implementing management actions would depend on a number of factors: (1) magnitude of resource concern, as identified in the Subbasin Review (USDI/BLM 1998a) and in subsequent data collection and monitoring efforts; (2) cooperation of adjoining landowner and/or operator cooperation; (3) public input; (4) available funding; and/or (5) staffing. All of these factors play a part in determining which management actions would be implemented in any one year. Projects (Appendix A, Table A-8) and other actions recommended to address resource concerns were prioritized, and an implementation list was compiled for Fiscal Year (FY) 1999 to FY 2000⁺. Project priorities would be developed annually and reflected in annual NEPA compliance documentation.

Table 7 also shows those general management actions available to resolve issues identified during the public scoping process and to meet the LAMP management objectives. Application of these individual management solutions would depend on the need identified through the Adaptive Management process. This table also shows the rationale or purpose of these actions and the benefitting issues and objectives. See Appendix A, Table A-8, for allotment/pasture specific project proposals identified to date and Appendix C for proposed grazing schedules recommended for the landscape area.

Grazing Schedules

Resource concerns by pasture are described in Appendix C. Where applicable, these concerns established generic factors or limitations placed on grazing schedules. Tables 7 and 8 explain these factors along with the utilization levels and duration descriptions. It is important to note that the timing and duration of grazing and utilization levels are both critical factors being used to control the impacts from livestock grazing. Close attention to these factors by both the livestock permittee and the BLM would be required to ensure success in achieving the stated objectives.

Appendix C contains the recommended grazing schedules for all I and M allotments in the landscape area with implementation beginning in FY 2000. Implementation of new grazing systems may be delayed until necessary projects are completed to provide the supporting infrastructure for livestock grazing. The schedules were developed to result in resource

improvement by the next scheduled analysis of monitoring data. The resource management actions contained in Table 7 were considered when developing grazing schedules. These resource management actions represent a means to attain improvement in a reasonable period of time and still address identified resource concerns. Private land in Lava Ridge and Brian Creek Allotments were included in the grazing rotation system with the operators' cooperation so both the private and public land are achieving the same objectives identified for the LAMP area.

Range Readiness Criteria for flexibility of livestock turnout prior to recognized use periods is identified in Table 8. Pasture move dates may vary from the defined schedule up to 4 days on each side of the identified pasture move date. Move dates outside of these general limits of flexibility due to climatic conditions, exceeding identified utilization levels or other factors would be considered by BLM staff at the time of the request or occurrence of indicators above. Move dates outside the general limits of flexibility must be consistent with meeting resource management objectives to be authorized.

Table 8. Range Readiness Criteria

Range Readiness Criteria	
Established for key species at scheduled time of use prior to grazing. Livestock grazing will not be scheduled prior to recognized use periods unless following criteria are met:	
Cheatgrass	(Few perennials) 3 rd leaf stage and 2" green active growth. (Significant perennials) 3 rd leaf stage and 2" active growth with old growth or 1" active growth without old feed.
Crested Wheatgrass Seeding	Average 4" active growth with old growth present or 6" active growth without old growth.
Squirreltail	Average 3-4" active growth with old growth present or 5" active growth without old growth.
Bluebunch wheatgrass	4" active growth with old growth present or 6" active growth without old growth.
Idaho fescue	3-4" active growth with old growth present or 5" active growth without old growth.
Thurber needlegrass	
Soil	Sufficient soil moisture exists to allow adequate regrowth on spring/fall range.
Stock Water	Pastures must have adequate stock water, or permittee must haul water.
Fences	No turnout until fences maintained (operator responsibility unless otherwise specified)
Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.	

Custodial (C) Allotments

Grazing schedules for custodial allotments would remain as authorized in conjunction with private land so long as public land management objectives continue to be met. Where there are resource concerns, such as riparian, upland or wildlife habitat, specific objectives for those resources would apply. In addition, utilization standards and follow-up monitoring would be applicable. The BLM would coordinate with those operators grazing livestock in custodial allotments to ensure their actions do not result in downward trends of resource conditions. Resource evaluations may result in changing the allotment category or making management changes. Establishing new trend plots to collect data may be required in some cases.

Existing Projects - Maintenance

There are numerous existing livestock projects across the landscape area (Appendix A, Table A-7) which require periodic maintenance. These projects include cattleguards, fences, pipelines, water troughs, spring developments and reservoirs. Normal maintenance of these projects is expected to proceed as in the past; however, these projects may be reevaluated, and certain projects may be removed. Many of the projects, with the exception of cattleguards, seedings and road maintenance, have been turned over to the livestock permittee for maintenance responsibilities by cooperative agreement. At the time of the cooperative agreement, projects were in useable condition.

Proposed Projects

Projects recommended for implementation are described in Appendix A, Table A-8. In order to take advantage of funding opportunities, some of these proposed projects were initiated during FY 1999 with separate NEPA analysis. On an annual basis, this project list would be reviewed and modified through the addition or deletion of projects. Those projects scheduled for implementation in future fiscal years would be addressed for NEPA requirements in subsequent Administrative Determinations.

Proposed projects in the Beaver Dam Creek WSA and any future proposed new management actions or projects not addressed in the LAMP EA (Table 7 of this document or in Appendix A, Table A-8) would not have met NEPA requirements and would require additional impact analysis in subsequent environmental documents.

Flexibility-Adaptive Management

Adaptive Management, or the continual process that ensures that management strategies will be adjusted to meet goals and objectives through planning, implementation, monitoring and evaluation, will be used throughout the implementation of LAMP. This process emphasizes

flexibility necessary to make adjustments while ensuring results. A continual feedback loop based on new information allows for mid-course corrections to grazing schedules, standards, guidelines and underlying assumptions in order to meet planned goals and objectives. It could also be used as a model for adjusting goals and objectives as new information develops.

Proposed changes (i.e. grazing schedules/operations modifications to Appendix C) that are minor in nature and do not change the analysis completed in the LAMP, may be approved by the Authorized Officer with a Conformance Determination. If the changes were not analyzed in the LAMP (such as a change in class of livestock), the appropriate NEPA review will be required prior to authorization

7.2 General Implementation Guidelines

For all management actions, mitigation measures would be taken to avoid direct, indirect and cumulative adverse impacts to the following resources, or the projects would be abandoned. Future legal or regulatory requirements or other directives will be incorporated into the LAMP where appropriate, as implementation occurs.

Wilderness Study Areas

Projects which may occur within the Beaver Dam Creek WSA must be consistent with BLM's IMP (USDI/BLM 1995). Additional impact analysis may be required prior to a proposed project's approval.

ACECs/RNAs

Projects which may occur within or adjacent to any designated ACEC/RNA (e.g. proposed North Ridge and South Ridge ACECs) would not conflict with the relevant and important values identified for these areas.

Threatened and Endangered Species, and Cultural Resources

Prior to any surface disturbing activities associated with implementing projects, special status species and cultural resource inventory surveys would be conducted. If the inventory surveys locate special status species or cultural resources, mitigation measures would be proposed which could include redesign, redevelopment or dropping the project.

Riparian Management

Projects which may occur within riparian conservation areas, as described in Appendix D of the draft SEORMP/EIS (USDI/BLM 1998b), would need to enhance or ensure that riparian habitat move towards DRFCs.

Wildlife Habitat

Projects which may occur within key wildlife habitats would be designed to enhance identified habitat characteristics and conditions as described in Appendix F of the Draft SEORMP/EIS (USDI/BLM 1998b). Where sage grouse nesting habitat has been identified under New Objectives in Appendix C, the management actions for sage grouse in Table 7 will be applied.

Roads

Existing vehicular ways and roads would be used whenever possible. Any necessary off-road travel would be done in such a manner as to minimize impacts to vegetation, underlying soils, and other resources. Where determined to be needed, off-highway vehicles with large, low pressure tires would be used. Traveling through riparian areas would be avoided.

Section 8.0

Monitoring

Monitoring is a critical part of the adaptive management cycle. The process of restoring and maintaining ecosystem function is implemented through management actions on a site-specific basis. Whether or not management actions are achieving the stated goals and objectives and the landscape is moving towards DRFCs will be determined by the monitoring of individual plant communities in individual pastures. The result of these monitoring efforts would then be evaluated at the landscape scale to determine the overall health of the area. The conclusions would also be used to make recommendations on whether or not to continue current management or what changes may be needed in management practices to meet goals and objectives. The results could be changes in mitigation measures, future actions, monitoring elements, objectives, standards, guidelines, and/or a mix of these actions. To complete the Adaptive Management Cycle, if degraded riparian areas, for example, are not showing progress towards meeting the desired range of future condition for the site, adjustments will be made as per Table 7 which include a wide array of options from land management actions to reduction or suspension of AUMs. We will be relying heavily on annual monitoring with progress reviews of each LAMP scheduled for 3, 5, and 7 year intervals after the final decision is signed. Annual monitoring, including completion of utilization studies and compliance inspections, will be critical for the recovery of degraded riparian and upland areas.

8.1 Monitoring Strategy

Different levels of monitoring or even accelerating regular monitoring cycles may be required due to prescribed fire, wildland fire, floods, drought or other climatic conditions, administrative actions or corrections related to land status, management or trespass, and other unforeseen events. All monitoring data would be promptly analyzed and applied in adaptive management. Data would continue to be available to interested or affected publics and agencies. Additional references on broad scale monitoring strategies and protocols can be found in the Appendix 3 of the Draft ICBEMP (USDA/USDI 1997).

Regular and supplemental monitoring methods would include the following (all time frames imply minimums):

Standards for Rangeland Health

Monitoring would focus on indicators identified during Rangeland Health Assessment including

watershed function in the uplands and riparian watershed areas, water quality, ecological processes, and habitat for native, threatened and endangered, and locally important species. Established standards and guidelines and any subsequent modifications would be consistent with indicators in the SRH (USDI/BLM 1997).

Upland Trend

Upland trend monitoring would focus on indicators identified during rangeland health assessments and would be conducted at a minimum of every 10 years and would include 3' x 3' photo trend plots, line intercept method and professional judgment as described in the *Vale District Monitoring Plan* (VDMP) (USDI/BLM 1983).

Riparian Trend

Riparian trend studies would focus on indicators identified during the rangeland health assessment. Areas would be evaluated at a minimum of once every 10 years and would incorporate aerial and surface (ground) photography. Perennial and intermittent streams in the landscape area would be flown according to protocols described in the VDMP (USDI/BLM 1983). Interpretation would follow the guidelines found in *The Use of Aerial Photography to Manage Riparian-Wetland Areas TR1737-10* (USDI/BLM 1994c). Established riparian photopoints would be retaken and evaluated. As necessary, new riparian photopoints would be established.

Herbaceous Studies

Herbaceous studies would be conducted annually on grazed pastures in I and M allotments. Utilization studies conducted during the growing season utilize the key forage plant method. However, because plant growth is still occurring, general soil moisture conditions, approximate numbers of livestock present, and how long cattle have been in that pasture would be considered in evaluating pasture move dates. Studies conducted after the growing season would measure the utilization on herbaceous species using the key forage method; estimating broad categories of use (light, medium, heavy, severe) or estimating/measuring the percentage of key grass species actually removed. The amount of vegetation consumed is related to the actual number of livestock, time they were in each pasture (actual use) and the crop year moisture levels to calculate the productivity of that pasture. Methods are described in detail in VDMP (USDI/BLM 1983) and consistent with the Interagency Agreement (USDI 1996). Maximum utilization limits were established in the *Ironside Grazing Management EIS*, 1980, and follows Holechek et al. 1987 and 1999, Heitschmidt et al. 1990, Taylor et al. 1993 and Stoddard et al. 1975.

Pastures with special management objectives, such as for sage grouse nesting habitat or riparian vegetation, have different utilization limits based on indicators of possible resource damage

(Table 7). These utilization limits were not established solely to meet minimum plant physiology needs, but rather to address the needs of other multiple uses of public lands. If monitoring studies indicate livestock use has reached established limits prior to the scheduled move date, it may be necessary to remove cattle from that pasture. Rapid assessments/monitoring would be conducted during the grazing period to locate potential problems early enough to implement other management options (such as temporary fencing or herding) in conjunction with the livestock operators. Early detection of problems through monitoring could reduce impacts to livestock operations and public land resources. Whenever utilization levels are exceeded prior to the anticipated pasture move date, there would be a joint evaluation by BLM, livestock operators and affected interests on short and/or long-term solutions including modifications of the grazing system, consistent with adaptive management.

Ocular Monitoring

Ocular monitoring would be conducted and compliance inspection forms prepared in pastures or areas of concern on an periodic basis to provide an assessment of resource conditions and compliance with management direction.

Supplemental Studies

Supplemental studies would be conducted as needed or periodically as budget and staffing permit. Examples include water quality and intensive riparian monitoring, green-line transects, habitat or bird species diversity (e.g., sage grouse habitat zone mapping in coordination with ODFW lek counts), and macro-invertebrate, erosion, and woody plant condition studies. The studies and monitoring techniques are described in the VDMP (USDI/BLM 1983), BLM handbooks and technical references.

Weed Monitoring

Monitoring weed infestations would include the annual mapping and treatment of all known and any new knapweed infestations and Class “A” invaders until the infestation is eliminated (Appendix A, Table A-5). Other noxious weed infestations would be treated as budget and staffing permits.

Section 9.0

Public Involvement

This LAMP is being developed in cooperation with the public and other local, county, state and other Federal agency representatives through scheduled public scoping meetings, public informational meetings, and during public review of this Draft LAMP. During this process, more than 120 individuals on our mailing list along with local watershed councils have received letters and copies of the bulletin, “*Flash Lights!*”, which provided information on the progress of LAMP development and public meetings announcements. Public involvement is an ongoing process which occurs prior to and during LAMP development. It provides the public a platform to address their concerns and comments on resource issues, management objectives and recommendations.

A Public Participation Plan was prepared in March, 1998 so that the LAMP would embrace a cooperative process throughout its entire life span. The 3rd paragraph in this plan says “Preparation of this Plan stresses consultation, coordination with interested/affected publics, private individuals, organizations and societies, in addition to collaboration with other Federal, State, local and Tribal governments. The purpose of involvement will be to familiarize the public with the LAMP process, obtain their input, exchange information, exchange common understanding of related data, identify goals and issues and to enlist assistance in formulating long-term objectives and guidelines for management of public lands within the Bully Creek geographic cluster [landscape area].” In the first paragraph: “Full public involvement will be supported through a series of activities which may include public meetings, information mailers and brochures, distribution of the draft and final LAMP, LAMP review and comment periods, informal contacts, group meetings, field trips, written letters and responses to comments” –all of which have been or are being done.

BLM, in addition to sending written notices on scoping meetings, phoned permittees and interested publics asking them to attend a public scoping meeting regarding the data collection and analysis process. This meeting was well attended. All permittees and interested publics were invited, by letter and follow-up phone call, to participate in Standard 2 Riparian assessments (several permittees took advantage of this opportunity). Also all permittees were individually asked to discuss grazing schedules and other grazing issues pertinent to their allotment(s)/pasture(s) – all of which did so prior to the publication of the draft LAMP. All of their input was seriously considered, and much of it incorporated (reflected) in Appendix C – Allotment/Pasture Characterizations and Grazing Schedules.

Development of the LAMP acknowledged existing and on-going landscape or watershed-wide planning efforts within the Bully Creek landscape area. As stated in the LAMP (Sections 1.1 and

1.3), one of the purposes for the Bully Creek LAMP was to coordinate planning and project development with the Malheur-Owyhee Watershed Council (MOWC), among others. In May 1998, while in the pre-planning process, BLM representatives made a formal presentation to MOWC involving the proposed LAMP. During the October and November 1998, MOWC meetings, additional presentations and information on LAMP developments were provided to the Council. Members of the Council received letters of invitation and updates (newsletters) on the status of the LAMP during these and subsequent meetings, which included announcements and invitations to attend public scoping meetings. MOWC was represented at all public scoping meetings, and those members present actively participated in discussions involving the Bully Creek LAMP.

As stated in the LAMP (Section 1.1), one of the purposes for developing the LAMP was to coordinate planning and project development with the Bully Creek Watershed Coalition, among others. During the pre-planning process of the LAMP, several existing and draft planning documents relevant to the Malheur River watershed were reviewed and findings in those documents were incorporated into the Bully Creek LAMP. One of those documents included the Bully Creek Watershed Assessment and Strategy, which was prepared by the Bully Creek Watershed Coalition in cooperation with federal and state agencies, including the BLM, Vale District. In validation of the Bully Creek Watershed Assessment and Strategy, the LAMP adopted the goals identified in the Coalition's plan, along with the data for private lands within and adjacent to the landscape area.

Through a continuous adaptive management process, cooperation with all those having an interest in the landscape area, are encouraged to cooperate in the development of future strategies necessary to meet the goals and objectives of the LAMP.

Responsible participants as defined in the Draft SEORMP, Appendix D (USDI/BLM, 1998b) and their level of involvement in this LAMP was determined by land ownership and the position and pattern of property within the landscape area. This included BLM, other local, county, state and Federal agencies and livestock operators and other affected interests within this landscape area. A list of participants is on file at the BLM Vale District Office.

Section 10.0

Maintenance of Effort Over Time

10.1 Timeline and Estimated Costs of Implementation

The timeline for implementing the LAMP would commence with project development in FY1999 and continue for a minimum of 10 years. Although resource improvement is expected within this 10-year time period, it may take longer to attain the DRFCs across the entire landscape area. Therefore, the timeline would be continuous. The LAMP is dynamic, and changes in direction may be required to adapt to changes in resource conditions as well as in the social and economic environment.

The cost for implementing the LAMP would vary from year-to-year, depending on project needs, available funding sources, and other issues (Table 9). Funding needs are known for FY1999. The projects listed in Appendix A, Table A-8 would be implemented in priority order until funding has been exhausted. Costs of future projects (through year 2009) are only an estimate. The number of projects and costs should gradually taper off once resources are moving towards DRFCs. Monitoring resource trends may identify additional projects.

Table 9. Estimated LAMP Implementation Costs

	FY 1999	FY 2000-2004	FY 2005-2009
Project Implementation Costs ¹	\$90,000	\$300,000	\$100,000
BLM Administrative Costs ²	\$20,000	\$200,000	\$200,000
Total	\$110,000	\$500,000	\$300,000

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.

¹. Costs of contracted materials and equipment

². Costs of labor and operations by BLM personnel

10.2 Reasonable Assurance of Implementation

The BLM is required to comply with many laws, mandates, regulations, policies and Executive Orders in directing multiple-use management on public land within the landscape area. This includes compliance with the Clean Water Act, Oregon standards for water quality, and other directives to ensure resources benefit the Nation and its economic and social needs. Management practices within the landscape area would be designed for healthy, sustainable, and functional ecosystems as described in SRH and in the Draft SEORMP/EIS (USDI/BLM 1998b).

Implementation of the LAMP would be the responsibility of the Vale District, Malheur Resource Area staff. The goal is to jointly fund (along with watershed partners, such as the Bully Creek Coalition, GWEB, and Malheur/Owyhee Watershed Council) a LAMP implementation Coordinator/Grant writer, who would oversee project development, monitoring, reporting functions and other responsibilities required for successful implementation.

Glossary

Area of Critical Environmental Concern (ACEC). Area where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect humans from natural hazards.

Arid. Without moisture, extremely dry.

Aridic (soil moisture regimes). Soils in arid climates that are dry for a large part of the year. Little leaching occurs in these soils and soluble salts accumulate in the subsurface.

Class “A” Weeds. A weed of known economic importance occurring in the County in small enough infestations to make eradication practicable -- or not known to occur, but its status in surrounding Counties or States makes future occurrence seem imminent.

Class “B” Weeds. A weed of known economic importance and of limited distribution in the County; is subject to intensive control or eradication where feasible.

Class “C” Weeds. A weed of known economic importance and of general distribution that should be subject to control as local conditions warrant.

C (Custodial) category allotment. Includes a high percentage of private land and is managed custodially while protecting existing resource values.

Desired Range of Future Condition. A portrayal of the land, resources, and socio economic conditions expected in 50 to 100 years if management objectives are achieved. This is a vision of the long-term condition of the ecosystem.

Ecological Status. The present state of vegetation of a range site in relation to the potential natural community for that site. Four classes are used to express the degree to which the production or composition of the present plant community reflects that of the potential natural community (climax):

Ecological Status (seral stage)	Percent of community in climax condition
Potential natural community	76-100
Late Seral	51-75
Mid-Seral	26-50
Early Seral	0-25

Ephemeral stream. A stream or reach of stream that flows only in direct response to precipitation. It receives no continuous supply from melting snow or other source, and its channel is above the water table at all times.

Eutrophic. designating a body of water in which the increase in mineral and organic nutrients has reduced the dissolved oxygen, producing an environment that favors plant over animal life.

Fenced Federal Range (FFR). Usually small tracts of public land, fenced into pastures with larger amounts of private land. Generally these are non-intensive management areas; however, there is some public land included in intensive management allotments (I category) which fit this definition.

Frigid (soil temperature regime). Soil with a mean annual temperature lower than 8°C and the difference between mean summer and winter soil temperatures is greater than 6°C.

Goal. The desired state or condition that a resource management policy or program is designed to achieve a goal is usually not quantifiable and may not have a specific date by which it is to be completed. Goals are the basis from which objectives are developed.

I (Improve) category allotment. Managed to improve current unsatisfactory resource conditions and will receive the highest priority for funding and management actions.

Intermittent stream. A stream or reach of stream that flows for prolonged periods when it receives groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Landscape (subbasin) level. A diverse land area made up of a group of interacting ecosystems that are repeated in similar manner throughout the area. The Bully Creek plan uses common watershed boundaries that share common resource values as the landscape boundary.

M (Maintain) category allotment. Managed to maintain current satisfactory resource conditions and will be actively managed to ensure that resource values do not decline.

Mesic. Moist.

Mesic (soil temperature regime). Soil with a mean annual temperature between 8°C and 15°C and the difference between mean summer and winter soil temperatures is greater than 6°C.

Objective. Planned results to be achieved within a stated time period. Objectives are subordinate to goals, are narrower in scope and shorter in range, and are more likely to be attained. Time periods for completion, and outputs or achievements that are measurable and quantifiable, are specified. (BLM Manual 1601)

Perennial stream. A stream in which water is present during all seasons of the year.

Proper Functioning Condition. The functioning condition of riparian-wetland areas is a result of interactions among geology, soil, water, and vegetation. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve food-water retention and ground water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater diversity.

Public Land. Any land or interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

Research Natural Area (RNA). An area where natural processes predominate and which is preserved for research and education. Under current BLM policy, these areas must meet the relevance and importance criteria of ACECs and are designated as ACECs.

Standards for Rangeland Health. In accordance with grazing regulations (43 CFR, 4180) that govern how the BLM administers livestock grazing on public rangelands, five minimum resource standards have been identified to be achieved and maintained for public rangelands. These five include standards for soils, riparian areas, ecological processes (nutrient cycling, energy flow, and hydrologic cycle), water quality, and providing healthy habitat for special status plant and animals and species of local importance.

Wild and Scenic River System (WSRS). Established by the Wild and Scenic Rivers Act of 1958 to protect rivers and their immediate environments that have outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, and other similar values and are preserved in free-flowing conditions. The system provides for the designation of three types of rivers: recreation, scenic, and wild.

Xeric (soil moisture regimes). Soils in Mediterranean-like climates where winters are moist and cool and summers are warm and dry.

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Appendix A

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Table A-1. Mining Claims

Allotment/Number Pasture	Number of Mining Claims & Group Name (as of 2/16/99)	Status	Potential for Mineral Development
Westfall/00227 Westfall Seeding	9 claims 9 White Mountain	No past or current activity	Low
Allotment #2/10201 Holding	37 claims 9 White Mountain	No past or current activity	Low
Bully Creek Seeding	4 Tiger	No past or current activity	Low
Mesa	7 E/B	Active mining near Ring Butte	High
Harper Seeding	13 E/B	No past or current activity	Low
	4 E/B	No past or current activity	Low
Allotment #3/10202 E. Cottonwood Seeding	29 claims 10 One Step	No past or current activity	Low
	10 White Mountain	No past or current activity	Moderate
	Natural Products		
W. Cottonwood Seeding	7 E/B	No past or current activity	Low
	2 E/B	No past or current activity	Low
Richie Flat/10214 Richie Flat Seeding	1 claim 1 White Mountain	Past exploration; currently inactive	Moderate
Buckbrush/10218 Buckbrush	65 claims 10 White Mountain	No past or current activity	Low
Buckbrush Seeding	48 White Mountain	Past exploration; currently inactive	Moderate
	4 White Cap	No past or current activity	Moderate
Gathering	3 White Mountain	No past or current activity	Low

Table A-2. Arid Vegetation Types (USDI/BLM 1977)

Arid Vegetation Types	Primary Species	Comments
Arid Rolling Hills	Primary shrub species are Wyoming and basin big sagebrush; primary grass species are bluebunch wheatgrass, Thurber needlegrass and Sandberg bluegrass.	Driest of the sites; occurs on shallow, loamy soils.
Droughty Rolling Hills	Occasional Idaho fescue with bluebunch wheatgrass and Sandberg bluegrass. Bitterbrush and squaw apple may be found along with big sagebrush.	Occurs on deep, loamy soils.
Droughty South Exposure Steep Droughty South	Primary grass species is bluebunch wheatgrass with a Thurber needlegrass component.	Low elevations; arid, southern aspect communities.
Droughty North Exposure Steep Droughty North	Primary grass species is Idaho fescue; bitterbrush and squaw apple occur in minor amounts with basin big sagebrush.	Mesic and loamy soil conditions at low elevations.
Scabland	Includes either low or stiff sagebrush, primarily with Sandberg bluegrass.	Shallow lithosols.
Semi-moist Bottom	Primary grass species is giant wildrye with a bluebunch wheatgrass component.	Deep, loamy soils.

Table A-3. Mesic Vegetation Types (USDI/BLM 1977)

Mesic Vegetation Types	Primary Species	Comments
Rolling Hills	Predominantly Idaho fescue and lesser amounts of bluebunch wheatgrass with a small component of mountain big sagebrush and bitterbrush.	High elevations with deep, loamy soils.
South Exposure Steep South	Primarily bluebunch wheatgrass with an Idaho fescue component; little big sagebrush and bitterbrush are present.	Deep soils and relatively high precipitation even on south-facing slopes.
North Exposure Steep North	Idaho fescue with some bluebunch wheatgrass; large amounts and varieties of forbs may be present; shrubs include mountain big sagebrush, snowberry, serviceberry and wax currant.	Loamy soils.
Moist Scabland	Primarily low sagebrush and Idaho fescue with small amounts of bluebunch wheatgrass; a minor bitterbrush component may be present.	
Moist Bottom	Primarily giant wildrye; few sites remain, most having been modified by cultivation practices.	Very deep, loamy soils.
Mahogany Rockland	Overstory is curlleaf mountain mahogany and mountain big sagebrush; primary understory Idaho fescue with small amounts of bluebunch wheatgrass.	
Juniper-Pine-Bunchgrass	Bluebunch wheatgrass with some Idaho fescue, mountain big sagebrush and low sagebrush; primary overstory is sparse Western juniper and ponderosa pine.	

Table A-4. Upland Plant Species

Common Name	Scientific Name	Arid Species	Mesic Species
TREES			
Black cottonwood	<i>Populus trichocarpa</i>		X
Chokecherry	<i>Prunus virginiana</i>		X
Curlleaf mountain mahogany	<i>Cercocarpus ledifolius</i>		X
Ponderosa pine	<i>Pinus ponderosa</i>		X
Quaking aspen	<i>Populus tremuloides</i>		X
Western juniper	<i>Juniperus occidentalis</i>		X
SHRUBS			
Basin big sagebrush	<i>Artemisia tridentata ssp. tridentata</i>	X	X
Bitterbrush	<i>Purshia tridentata</i>	X	X
Chokecherry	<i>Prunus sp.</i>	X	X
Currant	<i>Ribes sp.</i>	X	X
Gray rabbitbrush	<i>Chrysothamnus nauseosus</i>	X	X
Green rabbitbrush	<i>Chrysothamnus viscidiflorus</i>	X	X
Low sagebrush	<i>Artemisia arbuscula</i>	X	X
Mock orange	<i>Philadelphus lewisii</i>		X
Mountain big sagebrush	<i>Artemisia tridentata ssp. vasyana</i>		X
Serviceberry	<i>Amelanchier alnifolia</i>		X
Snowberry	<i>Symphoricarpos albus</i>		X
Squaw apple	<i>Peraphyllum ramosissimum</i>	X	X
Stiff sagebrush	<i>Artemisia rigida</i>	X	
Three-tip sagebrush	<i>Artemisia tripartita</i>	X	X
Willow	<i>Salix sp.</i>		X
Wyoming big sagebrush	<i>Artemisia tridentata ssp. wyomingensis</i>	X	
GRASSES			
Bluebunch wheatgrass	<i>Agropyron spicatum</i>	X	X
Bottlebrush squirreltail	<i>Sitanion hystrix</i>	X	X
Cheatgrass	<i>Bromus tectorum*</i>	X	X
Crested wheatgrass	<i>Agropyron cristatum*</i>	X	
Cusick bluegrass	<i>Poa cusickii</i>	X	X
Giant wildrye	<i>Elymus cinereus</i>	X	X
Idaho fescue	<i>Festuca idahoensis</i>	X	X
Indian ricegrass	<i>Oryzopsis hymenoides</i>	X	X
June grass	<i>Koleria cristata</i>	X	X

Common Name	Scientific Name	Arid Species	Mesic Species
Kentucky bluegrass	<i>Poa pratensis</i> *	X	X
Sandberg bluegrass	<i>Poa sandbergii</i>	X	X
Thurber needlegrass	<i>Stipa thurburiana</i>	X	X
FORBS			
Arrowleaf balsamroot	<i>Balsamorhiza sagittata</i>	X	X
Biscuitroot; desert parsley	<i>Lomatium</i> sp.	X	X
Bitterroot	<i>Lewisii rediviva</i>	X	X
Buckwheat	<i>Eriogonum</i> sp.	X	X
Daisy fleabane	<i>Erigeron</i> sp.	X	X
Death camas	<i>Zigadenus</i> sp.	X	X
Hawksbeard	<i>Crepis</i> sp.	X	X
Hooker balsamroot	<i>Balsamorhiza hookeri</i>	X	X
Larkspur	<i>Delphinium</i> sp.	X	X
Lupine	<i>Lupinus</i> sp.	X	X
Malheur cryptantha	<i>Cryptantha propria</i> TRA	X	
Milkvetch	<i>Astragalus</i> sp.	X	X
Ochre-flowered buckwheat	<i>Eriogonum ochracephalum</i> ssp. <i>calcareum</i> TRA	X	
Penstemon; beard's tongue	<i>Penstemon</i> sp.	X	X
Pussytoes	<i>Antennaria</i> sp.	X	X
Rockcress	<i>Arabis</i> sp.	X	X
Stoneseed	<i>Lithospermum ruderale</i>		X
Western yarrow	<i>Achillea millefolium</i>	X	X
Wild onion	<i>Allium</i> sp.	X	X
Woolly eriophyllum	<i>Eriophyllum lanatum</i>	X	X

*exotic species

TRA - BLM Tracking Species

Table A-5. Weed Species

Malheur County Weed Control District, Weed Control Policy and Classification System (Partial List)

Class “A” Weeds	
A weed species of known economic importance occurring in the county in small enough infestations to make eradication practical <u>or</u> the weed species is not known to occur in the county, but its status in surrounding counties or states makes a future occurrence seem imminent.	
Common Name	Scientific Name
Diffuse knapweed	<i>Centaurea diffusa</i>
Leafy spurge	<i>Euphorbia esula</i>
Rush Skeletonweed	<i>Chondrilla juncea</i>
Spotted knapweed (currently found in landscape area)	<i>Centaurea maculosa</i>
Yellow starthistle	<i>Centaurea solstitialis</i>
Class “B” Weeds	
A weed species of known economic importance and of limited distribution in the county subject to intensive control or eradication where feasible.	
Common Name	Scientific Name
Musk thistle	<i>Carduus nutans</i>
Russian knapweed	<i>Centaurea repens (Acroptilon repens)</i>
Scotch thistle	<i>Onopordum acanthium</i>
Class “C” Weeds	
A weed species of known economic importance and of general distribution subject to control as local conditions warrant.	
Common Name	Scientific Name
Canada thistle	<i>Cirsium arvense</i>
Kochia	<i>Kochia scoparia</i>
Medusahead rye	<i>Elymus caput-medusa</i>
Perennial pepperweed	<i>Lepidium latifolium</i>
Russian thistle	<i>Salsola kali</i>
Whitetop (heart, lens and globe podded)	<i>Cardaria sp.</i>
Other non-native weeds Not in the county weed classification system.	
Blue mustard	<i>Chorispora tenella</i>
Bull thistle	<i>Cirsium vulgare</i>
Bur buttercup	<i>Ranunculus testiculatus</i>
Clasping pepperweed	<i>Lepidium perfoliatum</i>
Common mullein	<i>Verbascum thapsus</i>
Prickly lettuce	<i>Lactuca serriola</i>
Tumble mustard	<i>Sisymbrium altissimum</i>

Table A-6. Special Status Animals

Common Name	Scientific Name	BLM Status	USFWS Status ²	Occupancy Status
Fishes				
Inland Redband trout	<i>Oncorhynchus mykiss sp.</i>	TRA		DB
Amphibians				
Columbia spotted frog	<i>Rana luteiventris</i>		C	DB
Western toad	<i>Bufo boreas</i>	TRA		DB
Woodhouse toad	<i>Bufo woodhousei</i>	TRA		DB
Birds				
Ferruginous hawk	<i>Buteo regalis</i>	SEN		DB
Loggerhead shrike	<i>Lanius ludovicianus</i>	TRA		DB
Northern bald eagle	<i>Haliaeetus leucocephalus</i>		T	WR
Northern goshawk	<i>Accipiter gentilis</i>	SEN		DB
Northern pygmy owl	<i>Glaucidium gnoma</i>	SEN		SB
Swainson's hawk	<i>Buteo swainsoni</i>	TRA		DB
Western bluebird	<i>Sialia mexicana</i>	TRA		SB
Western burrowing owl	<i>Athene cunicularia</i>	SEN		DB
Western sage grouse	<i>Centrocercus urophasianus</i>	ASM		DB
Mammals				
Fringed bat	<i>Myotis thysanodes</i>	TRA		U
Long-eared myotis	<i>Myotis evotis</i>	TRA		SB
Long-legged myotis	<i>Myotis volans</i>	TRA		DB
Preble's shrew	<i>Sorex preblei</i>	TRA		DB
Pygmy rabbit	<i>Brachylagus idahoensis</i>	ASM		DB
Townsend's big-eared bat	<i>Corynorhinus townsendii ssp.</i>	SEN		DB
Yuma myotis	<i>Myotis yumanensis</i>	TRA		U
Reptiles				
Desert horned lizard	<i>Phrynosoma platyrhinos</i>	TRA		DB
Mohave black-collared lizard	<i>Crotaphytus bicinctores</i>	TRA		DB
Northern sagebrush lizard	<i>Sceloporus graciosus</i>	TRA		SB

¹ Effective January 2000: SEN = sensitive species; ASM = assessment species; TRA = tracking species

² Effective January 2000: E = endangered; T = threatened; C = candidate

³ Occupancy Status pertains to Malheur Resource Area, and may not be valid for the Bully Creek Landscape area; DB = documented breeder; SB = suspected breeder; U = uncertain; WR = winter resident.

Table A-7. Existing Projects in the Landscape Area

Allotment	Project	Job #	Location	Maintenance Responsibility
Bully Creek 00132	Dunlop Drift Fence	0052	T. 18 S., R. 43 E., Section 13 NW¼NW¼	
Westfall 00227	Arriola Allotment Fence	0233	T. 18 S., R. 41 E., Section 7 NW¼NE¼	¹ CA
	Grady Romans Fence	0335	T. 18 S., R. 41 E., Section 21 NW¼NW¼	CA
	Lower Clover Creek Seeding Cattleguard #1	1199	T. 18 S., R. 41 E., Section 7 SW¼SE¼	² BLM
	Westfall Seeding Protective Fence	1570	T. 18 S., R. 41 E., Section 18 NE¼NE¼	CA
	Westfall Cattleguard	1608	T. 18 S., R. 41 E., Section 20 SW¼NE¼	BLM
	Westfall Seeding	4098	T. 18 S., R. 41 E., Section 17 SW¼NW¼	BLM
	Wilson & Edmunson Fence	4113	T. 18 S., R. 41 E., Section 16 NW¼NE¼	CA
	Arriola Water Gap Fence	4501	T. 18 S., R. 41 E., Section 5 SW¼SW¼	CA
	Westfall Seeding Trough	4718	T. 18 S., R. 41 E., Section 17 SE¼SE¼	³ NI
Allotment #2 10201	Bull Spring Truck Trail	0314	T. 17 S., R. 41 E., Section 1 SE¼SE¼	BLM
	Swede Flat Reservoir	0344	T. 18 S., R. 42 E., Section 5 NE¼SE¼	CA
	Walters Spring	0358	T. 17 S., R. 42 E., Section 7 SW¼NE¼	CA
	Rattlesnake Spring	0359	T. 17 S., R. 42 E., Section 8 SE¼SW¼	CA
	Bull Spring Extension	0360	T. 18 S., R. 42 E., Section 18	CA
	Mesa Brush Control	0488	T. 19 S., R. 41 E., Section 1 NW¼NW¼	BLM
	Cherry Spring	0545	T. 17 S., R. 42 E., Section 34 SW¼SW¼	CA
	Cottonwood Mtn Truck Trail	0549	T. 16 S., R. 42 E., Section 33 SE¼SE¼	BLM
	Horse Camp Spring #2	0550	T. 17 S., R. 42 E., Section 5 NE¼SE¼	CA
	Westfall Allotment 2&3 Fence	0562	T. 18 S., R. 41 E., Section 34 NW¼NE¼	CA
	Westfall Allotment 3&4 Fence	0564	T. 19 S., R. 41 E., Section 3 NE¼SW¼	CA
	Mesa Pasture Fence Cattleguard #1	0811	T. 19 S., R. 41 E., Section 14 SW¼SE¼	BLM
	Harper Seeding	0871	T. 19 S., R. 41 E., Section 24 NW¼NW¼	BLM
	NG Creek Seeding		T. 17 S., R. 42 E., Section 31 NE¼NW¼	BLM
	East Prong Spring	0932	T. 16 S., R. 41 E., Section 23 SE¼SW¼	CA
	Swede Spring	0933	T. 16 S., R. 41 E., Section 25 SW¼SW¼	CA
	North Salter Spring	0937	T. 17 S., R. 41 E., Section 12 SW¼SW¼	CA
	NG Creek Reservoir	0986	T. 17 S., R. 41 E., Section 13 NW¼NE¼	CA
	Cottonwood Creek Cattleguard	1092	T. 18 S., R. 42 E., Section 9 NW¼NE¼	BLM
	Hart Cattleguard	1100	T. 19 S., R. 41 E., Section 23 SE¼SE¼	BLM
	Salter Spring	1106	T. 17 S., R. 42 E., Section 19 SE¼NW¼	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	NG Creek Cattleguard	1107	T. 17 S., R. 42 E., Section 19 NE ¹ / ₄ SE ¹ / ₄	BLM
	Long Gulch Spring	1114	T. 16 S., R. 41 E., Section 35 SW ¹ / ₄ SE ¹ / ₄	NI
	Wildhorse Spring	1180	T. 19 S., R. 42 E., Section 12 NE ¹ / ₄ NW ¹ / ₄	CA
	Buck Spring	1183	T. 17 S., R. 42 E., Section 5 NE ¹ / ₄ NE ¹ / ₄	CA
	Harper Cattleguard	1189	T. 19 S., R. 42 E., Section 30 NW ¹ / ₄ NE ¹ / ₄	BLM
	East Fork Dry Creek Cattleguard	1213	T. 17 S., R. 41 E., Section 11 SW ¹ / ₄ NW ¹ / ₄	BLM
	Alkali Spring Cattleguard	1221	T. 18 S., R. 42 E., Section 9 NW ¹ / ₄ SW ¹ / ₄	BLM
	Allotment 2 Summer Fence	1288	T. 17 S., R. 41 E., Section 13 NW ¹ / ₄ NW ¹ / ₄	CA
	Mesa Well Pipeline	1409	T. 18 S., R. 41 E., Section 35 NE ¹ / ₄ NE ¹ / ₄	CA
	Willow Cattleguard	1609	T. 19 S., R. 41 E., Section 11 SE ¹ / ₄ SW ¹ / ₄	BLM
	Alkali Spring 2	1715	T. 18 S., R. 42 E., Section 13 SW ¹ / ₄ NE ¹ / ₄	CA
	Bully Creek Seeding Protective Fence	1760	T. 18 S., R. 41 E., Section 34 SE ¹ / ₄ SE ¹ / ₄	CA
	Bully Creek Seeding Protective Fence	1817	T. 18 S., R. 41 E., Section 34 NE ¹ / ₄ NE ¹ / ₄	NI
	Wild Horse Spring Division Fence	1892	T. 18 S., R. 42 E., Section 26 NW ¹ / ₄ NW ¹ / ₄	CA
	Bully Creek Seeding Cattleguard	1936	T. 19 S., R. 41 E., Section 3 NW ¹ / ₄ NE ¹ / ₄	BLM
	Yellow Cattleguard	2103	T. 18 S., R. 42 E., Section 30 NE ¹ / ₄ NE ¹ / ₄	BLM
	East Prong Spring Cattleguard	2105	T. 16 S., R. 41 E., Section 23 SW ¹ / ₄ NW ¹ / ₄	BLM
	North Spring Cattleguard	2106	T. 18 S., R. 42 E., Section 7 NW ¹ / ₄ NE ¹ / ₄	BLM
	Wild Horse Charco Reservoir	2158	T. 19 S., R. 42 E., Section 12 NE ¹ / ₄ NW ¹ / ₄	NI
	NG Guzzler	4145	T. 18 S., R. 42 E., Section 9 SE ¹ / ₄ NW ¹ / ₄	NI
	McKinney Fence	4202	T. 16 S., R. 41 E., Section 25 NW ¹ / ₄ NE ¹ / ₄	CA
	Jordan Water Gap Fence	4300	T. 18 S., R. 42 E., Section 4 NE ¹ / ₄ SE ¹ / ₄	CA
	Bent Fender Spring	4322	T. 16 S., R. 41 E., Section 25 NW ¹ / ₄ NW ¹ / ₄	CA
	Frank Turner Coop Fence	4500	T. 19 S., R. 42 E., Section 10 SW ¹ / ₄ SW ¹ / ₄	CA
	Alkali Spring	4577	T. 18 S., R. 42 E., Section 9 SW ¹ / ₄ SW ¹ / ₄	CA
	Alkali Spring Pipeline	4583	T. 18 S., R. 42 E., Section 9 SW ¹ / ₄ SW ¹ / ₄	CA
	Dry Creek Boundary Fence	5170	T. 18 S., R. 41 E., Section 14 SW ¹ / ₄ SE ¹ / ₄	CA
	Jones Boundary Fence	5177	T. 19 S., R. 39 E., Section 29 NW ¹ / ₄ SW ¹ / ₄	NI
	Stump Reservoir	5244	T. 17 S., R. 42 E., Section 9 NW ¹ / ₄ SW ¹ / ₄	CA
	Burnt Stump Reservoir	5245	T. 17 S., R. 42 E., Section 21 NE ¹ / ₄ SW ¹ / ₄	CA
	NG Riparian Fence	5293	T. 16 S., R. 41 E., Section 20 NW ¹ / ₄ NW ¹ / ₄	NI
	0201 Riparian Fence	5294	T. 17 S., R. 42 E., Section 28 SE ¹ / ₄ NW ¹ / ₄	NI
	NG Cattleguard #1	5504	T. 16 S., R. 41 E., Section 25 SW ¹ / ₄ NW ¹ / ₄	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	NG Cattleguard #2	5511	T. 16 S., R. 41 E., Section 25 NE ¹ / ₄ NE ¹ / ₄	CA
	Cottonwood Creek Riparian Fence	5829	T. 17 S., R. 42 E., Section 5 NW ¹ / ₄ SW ¹ / ₄	NI
Allotment #3 10202	Black Canyon Reservoir	0151	T. 19 S., R. 40 E., Section 23 NE ¹ / ₄ NW ¹ / ₄	CA
	West Fork Spring	0176	T. 19 S., R. 40 E., Section 31 SW ¹ / ₄ NE ¹ / ₄	CA
	Pole Creek Drift Fence	0225	T. 20 S., R. 39 E., Section 28 SW ¹ / ₄ NE ¹ / ₄	NI
	Westfall Butte Truck Trail	0237	T. 19 S., R. 40 E., Section 3 SE ¹ / ₄ SW ¹ / ₄	BLM
	Black Canyon Road	0257	T. 19 S., R. 40 E., Section 11 SE ¹ / ₄ NW ¹ / ₄	BLM
	Westfall Allotment 3 & 4 Fence	0560	T. 19 S., R. 40 E., Section 13 NE ¹ / ₄ NE ¹ / ₄	CA
	Westfall 3 & 4 Section B Fence	0588	T. 19 S., R. 40 E., Section 27 NE ¹ / ₄ NE ¹ / ₄	CA
	Angel Wells Reservoir	0647	T. 19 S., R. 38 E., Section 23 NW ¹ / ₄ NE ¹ / ₄	CA
	Pole Creek Reservoir	0793	T. 19 S., R. 39 E., Section 30 NE ¹ / ₄ SW ¹ / ₄	CA
	Allotment 3 Reservoir	0808	T. 19 S., R. 40 E., Section 12 SW ¹ / ₄ NE ¹ / ₄	CA
	Upper Gregory Creek Reservoir	0810	T. 18 S., R. 39 E., Section 28 NE ¹ / ₄ SE ¹ / ₄	CA
	South Gregory Creek Reservoir	0812	T. 19 S., R. 39 E., Section 3 SW ¹ / ₄ NE ¹ / ₄	CA
	Gregory Creek Reservoir	0813	T. 18 S., R. 39 E., Section 27 SE ¹ / ₄ SE ¹ / ₄	CA
	Warm Spring Creek Reservoir	0815	T. 19 S., R. 38 E., Section 12 SW ¹ / ₄ NW ¹ / ₄	CA
	Cottonwood Creek Seeding	0895	T. 19 S., R. 40 E., Section 1 NE ¹ / ₄ NW ¹ / ₄	BLM
	Muir Reservoir	0915	T. 18 S., R. 39 E., Section 32 SE ¹ / ₄ SE ¹ / ₄	CA
	Corral Reservoir	0918	T. 18 S., R. 38 E., Section 36 SE ¹ / ₄ NW ¹ / ₄	CA
	Swamp Creek Reservoir	0926	T. 18 S., R. 40 E., Section 32 SW ¹ / ₄ NE ¹ / ₄	CA
	Jones Shear Creek Reservoir	0991	T. 19 S., R. 39 E., Section 26 NW ¹ / ₄ NE ¹ / ₄	CA
	Annie's Reservoir	0993	T. 19 S., R. 40 E., Section 21 SE ¹ / ₄ SE ¹ / ₄	CA
	Pense Spring Reservoir	0995	T. 19 S., R. 40 E., Section 18 SW ¹ / ₄ SE ¹ / ₄	CA
	Peavine Reservoir	0997	T. 20 S., R. 39 E., Section 1 NE ¹ / ₄ NW ¹ / ₄	CA
	Baker Spring	1026	T. 19 S., R. 38 E., Section 23 NE ¹ / ₄ NE ¹ / ₄	CA
	Buckboard Spring	1047	T. 19 S., R. 39 E., Section 34 SE ¹ / ₄ SW ¹ / ₄	CA
	Badger Spring	1049	T. 19 S., R. 39 E., Section 27 SW ¹ / ₄ SW ¹ / ₄	CA
	Hub Spring	1051	T. 19 S., R. 39 E., Section 21 SE ¹ / ₄ SW ¹ / ₄	CA
	Buckaroo Spring	1053	T. 19 S., R. 39 E., Section 29 SE ¹ / ₄ NE ¹ / ₄	CA
	Westfall Butte Truck Trail	1069	T. 19 S., R. 39 E., Section 7 NE ¹ / ₄ NW ¹ / ₄	BLM
	Cottonwood Creek Seeding Cattleguard #1	1094	T. 19 S., R. 40 E., Section 11 NE ¹ / ₄ NE ¹ / ₄	BLM
	New Juniper Spring	1119	T. 19 S., R. 39 E., Section 9 NE ¹ / ₄ NW ¹ / ₄	CA
	Muir Spring	1145	T. 19 S., R. 39 E., Section 5 NE ¹ / ₄ SW ¹ / ₄	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	Westfall Cattleguard	1362	T. 18 S., R. 41 E., Section 28 NW¼NW¼	BLM
	Trail Reservoir	1365	T. 19 S., R. 39 E., Section 6 NE¼NE¼	CA
	Zader Reservoir	1366	T. 19 S., R. 38 E., Section 1 SW¼SE¼	NI
	Westfall Field Stock Trail	1408	T. 19 S., R. 39 E., Section 15 NE¼SE¼	BLM
	Gregory Spring	1482	T. 19 S., R. 39 E., Section 27 NW¼NE¼	CA
	Ford Cattleguard	1590	T. 18 S., R. 40 E., Section 11 SW¼SE¼	BLM
	Hog Creek Cattleguard	1592	T. 19 S., R. 40 E., Section 23 SW¼SW¼	BLM
	Lawrence Cattleguard	1594	T. 18 S., R. 40 E., Section 36 SW¼SE¼	BLM
	Swamp Creek Seeding Protective Fence	1625	T. 18 S., R. 40 E., Section 34 NW¼NW¼	NI
	Swamp Creek Seeding	1673	T. 18 S., R. 40 E., Section 22 NE¼NE¼	BLM
	China Creek Stock Trail	1914	T. 19 S., R. 40 E., Section 22 NW¼NE¼	BLM
	Hanna Place Cattleguard	2109	T. 17 S., R. 39 E., Section 33 SW¼SE¼	BLM
	Allotment 3 Division Fence	2166	T. 19 S., R. 40 E., Section 19 NW¼SW¼	CA
	Gregory Creek Cattleguard	3506	T. 18 S., R. 39 E., Section 27 SE¼SE¼	BLM
	Upper Pole Cattleguard	3507	T. 19 S., R. 39 E., Section 30 NW¼NE¼	BLM
	Rimrock Cattleguard	3509	T. 19 S., R. 40 E., Section 19 NW¼SW¼	BLM
	Allotment 4 Stock Trail	3600	T. 19 S., R. 40 E., Section 13 NE¼NE¼	BLM
	Becker Spring	3796	T. 19 S., R. 39 E., Section 20 SE¼NW¼	CA
	Rimrock Spring	3823	T. 19 S., R. 39 E., Section 36 NW¼NW¼	CA
	Little Rock Reservoir	3854	T. 19 S., R. 41 E., Section 7 NW¼SW¼	CA
	Pole Creek Division Fence	4052	T. 19 S., R. 38 E., Section 25 NE¼NW¼	Good
	Devils Rim Spring	4071	T. 18 S., R. 39 E., Section 29 SW¼SE¼	Good 1989 Dry 1991
	Pole Creek Spring	4090	T. 19 S., R. 39 E., Section 19 SE¼NE¼	Good 1988
	Middle Spring	4210	T. 19 S., R. 39 E., Section 14 NE¼SE¼	Good 1987
	Big Flat Spring Development	4239	T. 19 S., R. 38 E., Section 1 NW¼NE¼	Good 1986
	Jonesboro Cattleguard	4311	T. 20 S., R. 39 E., Section 28 SW¼SE¼	BLM
	Antelope Cattleguard	4316	T. 20 S., R. 39 E., Section 2 NW¼SW¼	BLM
	Cottonwood Division Fence	4516	T. 18 S., R. 41 E., Section 31 NW¼NE¼	NI
	South Pole Creek Fence	4775	T. 20 S., R. 39 E., Section 17 NE¼SW¼	CA
	Swamp Creek Fence	4826	T. 18 S., R. 40 E., Section 33 SW¼SW¼	CA
	Pedro Pit	4897	T. 19 S., R. 38 E., Section 25 SW¼SE¼	CA
	Maybe Reservoir	4898	T. 20 S., R. 39 E., Section 8 SW¼NW¼	CA
	Hoffer Reservoir	4899	T. 19 S., R. 38 E., Section 24 SE¼SW¼	NI

Allotment	Project	Job #	Location	Maintenance Responsibility
	Kelsey Butte Corral	4993	T. 19 S., R. 39 E., Section 19 SW¼SE¼	CA
	Allotment 3 Cherry Spring	4996	T. 20 S., R. 39 E., Section 6 SE¼SW¼	Good
	Hart Spring	5000	T. 19 S., R. 39 E., Section 4 NE¼SW¼	Dry
	Kelsey Butte Fence	5098	T. 19 S., R. 39 E., Section 20 NW¼NW¼	CA
	Black Canyon Division Fence	5168	T. 19 S., R. 40 E., Section 15 NW¼NW¼	CA
	New Deal Reservoir	5185	T. 19 S., R. 39 E., Section 23 SW¼NW¼	CA
	Middle Black Canyon Reservoir	5186	T. 19 S., R. 40 E., Section 16 NW¼NE¼	CA
	Lower Black Canyon Reservoir	5187	T. 19 S., R. 40 E., Section 11 NW¼SW¼	CA
	Gregory Creek #1 Reservoir	5188	T. 18 S., R. 40 E., Section 29 NW¼NE¼	Good
	Gregory Creek #2 Reservoir	5189	T. 18 S., R. 40 E., Section 19 NE¼SW¼	Good
	Gregory Creek #3 Reservoir	5190	T. 18 S., R. 39 E., Section 36 NE¼SE¼	Good
	Gregory Creek #4 Reservoir	5191	T. 18 S., R. 39 E., Section 24 NE¼NW¼	Good
	Allotment 3 Wildlife Fence	5232	T. 19 S., R. 40 E., Section 12 SW¼NE¼	NI
	Sheep Corral Reservoir	5251	T. 19 S., R. 40 E., Section 30 SW¼SE¼	Good
	Gregory Creek Fence	5383	T. 18 S., R. 39 E., Section 20 SW¼SE¼	CA
	Pense Spring Reservoir Exclosure	5470	T. 19 S., R. 40 E., Section 18 SW¼SE¼	NI
	Stud Horse Division Fence	5492	T. 19 S., R. 38 E., Section 2 NW¼NE¼	CA
	Stud Horse Division Cattleguard	5543	T. 19 S., R. 39 E., Section 6 SW¼SE¼	BLM
	Kelsey Cattleguard	5590	T. 19 S., R. 39 E., Section 20 SW¼NW¼	BLM
	Indian Creek Protective Fence	5606	T. 18 S., R. 39 E., Section 15 SE¼SW¼	CA
	Cooper Reservoir	5664	T. 18 S., R. 39 E., Section 22 NE¼SE¼	Good
Rail Canyon 10205	Medlin Fence	0033	T. 17 S., R. 38 E., Section 2 SE¼SE¼	CA
	Scott Jordan Fence	0650	T. 17 S., R. 39 E., Section 11 NE¼NW¼	CA
	Steamboat Cattleguard	0700	T. 16 S., R. 38 E., Section 34 SE¼NE¼	BLM
	Kitten Canyon Spring	1009	T. 17 S., R. 38 E., Section 2 SE¼NW¼	CA
	Kitten Canyon Reservoir	1022	T. 17 S., R. 38 E., Section 3 NE¼NW¼	CA
	Rock Creek Reservoir	1024	T. 17 S., R. 39 E., Section 11 SE¼NW¼	CA
	Chastain Division Fence	1258	T. 17 S., R. 38 E., Section 11 NE¼NE¼	CA
	Bendire Creek Cattleguard	1589	T. 16 S., R. 38 E., Section 30 SE¼SE¼	BLM
	Ringe Butte Cattleguard #1	1606	T. 16 S., R. 37 E., Section 23 SE¼SE¼	BLM
	Poor Jug Spring	4840	T. 16 S., R. 38 E., Section 34 SW¼SE¼	CA
	Pretty Pat Spring	4843	T. 16 S., R. 38 E., Section 33 NE¼SE¼	CA
	Hart Management Fence	4955	T. 16 S., R. 38 E., Section 30 NE¼NE¼	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	Clover Reservoir	5247	T. 17 S., R. 39 E., Section 9 NE ¹ / ₄ NE ¹ / ₄	CA
	Rock Reservoir	5248	T. 17 S., R. 39 E., Section 9 SW ¹ / ₄ NW ¹ / ₄	CA
	Sheep Trough Spring	5334	T. 16 S., R. 38 E., Section 20 NW ¹ / ₄ NE ¹ / ₄	Good 1987
	Chastain Spring #2	5362	T. 17 S., R. 38 E., Section 14 NE ¹ / ₄ NE ¹ / ₄	Good 1994
	Crow Creek Spring #1	5363	T. 16 S., R. 38 E., Section 17 SW ¹ / ₄ SW ¹ / ₄	Good 1988
	Crow Creek Spring #2	5364	T. 16 S., R. 38 E., Section 17 SW ¹ / ₄ NW ¹ / ₄	NI
	Crow Creek Spring #3	5365	T. 16 S., R. 38 E., Section 20 SW ¹ / ₄ SW ¹ / ₄	Good 1989
	Clover Creek Boundary Fence	5610	T. 16 S., R. 38 E., Section 11 NW ¹ / ₄ NW ¹ / ₄	NI
	Ginger Spring	5668	T. 16 S., R. 38 E., Section 20 SE ¹ / ₄ NW ¹ / ₄	Good 1989
	Chastain Division Fence	5772	T. 17 S., R. 39 E., Section 4 SW ¹ / ₄ SW ¹ / ₄	CA
	Helmet Reservoir	6161	T. 17 S., R. 38 E., Section 17 NW ¹ / ₄ NE ¹ / ₄	Good 1995
Richie Flat 10214	Ridge Road Reservoir	0144	T. 17 S., R. 40 E., Section 26 NW ¹ / ₄ SW ¹ / ₄	CA
	Saddle Reservoir	0146	T. 17 S., R. 40 E., Section 21 SW ¹ / ₄ NW ¹ / ₄	CA
	Westfall Allotment 1 Fence	0265	T. 17 S., R. 39 E., Section 13 SE ¹ / ₄ SE ¹ / ₄	CA
	Log Creek Basin Reservoir	0340	T. 17 S., R. 40 E., Section 1 SW ¹ / ₄ SW ¹ / ₄	CA
	Lower Clover Creek Seeding Fence	0960	T. 17 S., R. 40 E., Section 36 SW ¹ / ₄ SW ¹ / ₄	NI
	Robin Reservoir	0948	T. 17 S., R. 40 E., Section 15 SE ¹ / ₄ SW ¹ / ₄	NI
	Lower Clover Creek Seeding	0960	T. 17 S., R. 40 E., Section 23 SW ¹ / ₄ SW ¹ / ₄	BLM
	Lower Clover Creek Seeding Fence	1130	T. 17 S., R. 40 E., Section 26 NW ¹ / ₄ NW ¹ / ₄	NI
	Baker Spring Cattleguard	1196	T. 17 S., R. 39 E., Section 1 SE ¹ / ₄ SE ¹ / ₄	BLM
	Lower Clover Creek Seeding Cattleguard #2	1201	T. 17 S., R. 40 E., Section 36 SW ¹ / ₄ SW ¹ / ₄	BLM
	Lower Clover Creek Seeding Cattleguard #3	1202	T. 17 S., R. 40 E., Section 22 SE ¹ / ₄ SE ¹ / ₄	BLM
	Clover Creek Allotment Fence	1290	T. 17 S., R. 40 E., Section 9 NW ¹ / ₄ NE ¹ / ₄	CA
	West Fork Log Creek Spring	1392	T. 17 S., R. 40 E., Section 1 NW ¹ / ₄ NE ¹ / ₄	NI
	Deep Creek Division Fence	1477	T. 17 S., R. 40 E., Section 11 NE ¹ / ₄ NW ¹ / ₄	CA
	Wallace Bethel Management Fence	1823	T. 17 S., R. 41 E., Section 6 NW ¹ / ₄ NW ¹ / ₄	NI
	Buckbrush Seeding	1957	T. 18 S., R. 41 E., Section 5 NW ¹ / ₄ NW ¹ / ₄	BLM
	Reds Creek Threeway Exclosure	3795	T. 17 S., R. 41 E., Section 20 NE ¹ / ₄ NW ¹ / ₄	NI
	Tootsie Cattleguard	4307	T. 17 S., R. 40 E., Section 36 SW ¹ / ₄ NW ¹ / ₄	BLM
	Clover Creek Fence	5092	T. 17 S., R. 39 E., Section 1 SE ¹ / ₄ SE ¹ / ₄	CA
	Log Cabin Division Fence	5169	T. 17 S., R. 41 E., Section 6 NE ¹ / ₄ NW ¹ / ₄	CA
	Poison Butte Boundary Fence	5171	T. 17 S., R. 41 E., Section 32 NE ¹ / ₄ NW ¹ / ₄	CA
	Red Reservoir	5193	T. 17 S., R. 41 E., Section 17 NE ¹ / ₄ SW ¹ / ₄	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	North Ridge Reservoir	5214	T. 17 S., R. 39 E., Section 12 SE¼NE¼	CA
	Birch Creek Reservoir	5241	T. 17 S., R. 41 E., Section 7 SE¼NW¼	CA
	Richie Flat Seeding	5297	T. 18 S., R. 40 E., Section 1 NW¼SE¼	BLM
	South Ridge Brush Control	5302	T. 17 S., R. 40 E., Section 15 SW¼SE¼	BLM
	North Ridge Brush Control	5303	T. 17 S., R. 39 E., Section 1 SE¼SE¼	BLM
	North Ridge Control Burn	5323	T. 17 S., R. 40 E., Section 21 SE¼NE¼	BLM
	South Ridge Spring	5338	T. 17 S., R. 40 E., Section 23 NW¼NW¼	NI
	Little Basco Spring	5339	T. 17 S., R. 41 E., Section 20 SW¼NW¼	NI
	Richie Flat Windmill	5589	T. 18 S., R. 41 E., Section 7 NW¼NW¼	NI
Brain Creek 10215	Bull Spring Pipeline	0360	T. 18 S., R. 41 E., Section 18 T. 18 S., R. 42 E., Section 7	replace pipe
	Red Creek Cattleguard	0693	T. 17 S., R. 41 E., Section 5 SW¼NE¼	Good 1987
	Buckbrush Creek Division Fence	0845	T. 16 S., R. 41 E., Section 32 SW¼SW¼	CA
	Summer Division Fence	1288	T. 17 S., R. 41 E., Section 8, 9, 16, 17	CA
	NG Creek Seeding Division Fence	4233	T. 18 S., R. 42 E., Section 1 SE¼SE¼	OK
	Brian Creek Division Fence	5350	T. 16 S., R. 41 E., Section 28 NE¼NW¼	OK Good
Buckbrush 10218	Buckbrush Reservoir	0342	T. 17 S., R. 41 E., Section 21 SW¼SW¼	CA
	Homestead Spring	0355	T. 16 S., R. 41 E., Section 28 SE¼SE¼	CA
	Upper Mud Spring	0357	T. 17 S., R. 41 E., Section 3 SE¼NW¼	CA
	Buckbrush Cattleguard	0695	T. 17 S., R. 41 E., Section 29 SE¼NW¼	BLM
	Salters Canyon Reservoir	0988	T. 17 S., R. 41 E., Section 25 SW¼NW¼	CA
	Twin Juniper Spring	1058	T. 16 S., R. 41 E., Section 22 NW¼NW¼	CA
	Chokecherry Spring	1122	T. 16 S., R. 41 E., Section 26 SW¼SW¼	CA
	NG Creek Seeding Protective Fence	1132	T. 17 S., R. 41 E., Section 26 SE¼SW¼	CA
	Dry Creek Cattleguard	1215	T. 17 S., R. 41 E., Section 16 NW¼NE¼	CA
	Lost Spring	1533	T. 16 S., R. 41 E., Section 27 NE¼NW¼	CA
	Grey Horse Spring	1534	T. 16 S., R. 41 E., Section 22 SE¼SE¼	CA
	Pin Butte Cattleguard	1866	T. 18 S., R. 41 E., Section 5 NW¼SW¼	BLM
	Buckbrush Seeding Protective Fence	2077	T. 17 S., R. 41 E., Section 32 NW¼NE¼	CA
	Buckbrush Cattleguard	2104	T. 17 S., R. 41 E., Section 29 SE¼SW¼	BLM
	Cottonwood Mountain Fence	3735	T. 16 S., R. 41 E., Section 26 NW¼NW¼	CA
	Mud Spring	4079	T. 18 S., R. 41 E., Section 4 SE¼SW¼	CA
	Homestead Reservoir	4252	T. 16 S., R. 41 E., Section 33 NW¼SE¼	CA
	Buckbrush Reservoir	4272	T. 17 S., R. 41 E., Section 4 NE¼NW¼	NI

Allotment	Project	Job #	Location	Maintenance Responsibility
	Chalk Spring	4579	T. 18 S., R. 41 E., Section 3 NE ¹ / ₄ SW ¹ / ₄	CA
	Buckbrush Fence	4985	T. 17 S., R. 41 E., Section 14 NW ¹ / ₄ NW ¹ / ₄	CA
	Poison Butte Reservoir	5194	T. 17 S., R. 41 E., Section 20 SE ¹ / ₄ SE ¹ / ₄	Good
	Firebreak Reservoir	5201	T. 17 S., R. 41 E., Section 23 SE ¹ / ₄ NE ¹ / ₄	CA
	Big Poison Reservoir	5242	T. 17 S., R. 41 E., Section 32 NW ¹ / ₄ SE ¹ / ₄	CA
	Brady Reservoir	5243	T. 17 S., R. 41 E., Section 9 SW ¹ / ₄ SE ¹ / ₄	CA
	Buck Basin Reservoir	5246	T. 17 S., R. 41 E., Section 28 NW ¹ / ₄ SE ¹ / ₄	CA
	Poison Butte Pipeline	5464	T. 17 S., R. 41 E., Section 32 SW ¹ / ₄ NE ¹ / ₄	NI
Willow Basin 10222	North Fork Cattleguard	0413	T. 21 S., R. 38 E., Section 17 NE ¹ / ₄ NW ¹ / ₄	BLM
	Bendire Fence	0499	T. 17 S., R. 37 E., Section 2 NW ¹ / ₄ NW ¹ / ₄	CA
	Lake Ridge Fence	0590	T. 17 S., R. 38 E., Section 25 NW ¹ / ₄ SW ¹ / ₄	CA
	Big Flat Reservoir	0921	T. 17 S., R. 38 E., Section 33 NW ¹ / ₄ SE ¹ / ₄	CA
	Mail Box Canyon Reservoir	0923	T. 18 S., R. 38 E., Section 3 NW ¹ / ₄ NE ¹ / ₄	CA
	Taylor Reservoir	0984	T. 18 S., R. 38 E., Section 12 NW ¹ / ₄ NE ¹ / ₄	CA
	Jenkins Reservoir	1029	T. 17 S., R. 39 E., Section 17 SE ¹ / ₄ SW ¹ / ₄	CA
	Little Juniper Spring	1067	T. 18 S., R. 39 E., Section 6 SE ¹ / ₄ NE ¹ / ₄	CA
	Antelope Spring	1083	T. 17 S., R. 38 E., Section 28 SW ¹ / ₄ NW ¹ / ₄	CA
	Coyote Spring	1117	T. 18 S., R. 39 E., Section 6 SE ¹ / ₄ NW ¹ / ₄	CA
	Cottonwood Creek Seeding Fence	1118	T. 18 S., R. 40 E., Section 24 NE ¹ / ₄ NE ¹ / ₄	CA
	Upper Willow Spring Basin Cattleguard	1194	T. 18 S., R. 38 E., Section 15 SE ¹ / ₄ SW ¹ / ₄	BLM
	Bully Creek Cattleguard	1208	T. 18 S., R. 40 E., Section 24 NW ¹ / ₄ NE ¹ / ₄	BLM
	Steamboat Ridge Division Fence	1377	T. 17 S., R. 38 E., Section 9 NW ¹ / ₄ NE ¹ / ₄	CA
	Big Flat Division Fence	1379	T. 17 S., R. 38 E., Section 22 SW ¹ / ₄ SW ¹ / ₄	CA
	Willow Basin Spring	1466	T. 18 S., R. 38 E., Section 10 SE ¹ / ₄ NW ¹ / ₄	CA
	Sheep Rock Spring	1742	T. 17 S., R. 37 E., Section 2 SW ¹ / ₄ NW ¹ / ₄	CA
	Sheep Rock Cattleguard	1770	T. 17 S., R. 37 E., Section 3 SE ¹ / ₄ NE ¹ / ₄	BLM
	Hannah Place Cattleguard	1864	T. 18 S., R. 40 E., Section 7 SE ¹ / ₄ NW ¹ / ₄	BLM
	Cottonwood Creek Seeding Cattleguard 2	4237	T. 18 S., R. 40 E., Section 25 SW ¹ / ₄ SW ¹ / ₄	BLM
	Bender Ridge Corral	4947	T. 18 S., R. 38 E., Section 2 NW ¹ / ₄ SE ¹ / ₄	NI
	Jenkins State Block Fence	5090	T. 17 S., R. 38 E., Section 13 NE ¹ / ₄ SE ¹ / ₄	CA
	Pan Handle Fence	5096	T. 18 S., R. 39 E., Section 12 NE ¹ / ₄ NE ¹ / ₄	CA
	Little Indian Reservoir	5212	T. 18 S., R. 39 E., Section 9 SW ¹ / ₄ SE ¹ / ₄	CA
	Coyote Reservoir	5213	T. 17 S., R. 39 E., Section 32 SW ¹ / ₄ NE ¹ / ₄	CA

Allotment	Project	Job #	Location	Maintenance Responsibility
	Bully Reservoir	5215	T. 17 S., R. 38 E., Section 35 NW¼SE¼	CA
	Hanna Reservoir 2	5216	T. 17 S., R. 39 E., Section 35 SW¼NW¼	CA
	Big Indian Reservoir	5217	T. 18 S., R. 39 E., Section 11 SE¼NW¼	CA
	Scott Reservoir	5249	T. 17 S., R. 39 E., Section 22 NW¼NW¼	CA
	Bendire Creek Spring Enclosure	5274	T. 17 S., R. 37 E., Section 14 NE¼SW¼	NI
	Elk Spring	5275	T. 17 S., R. 37 E., Section 14 NE¼NE¼	Good 1980
	Robin Reservoir	5276	T. 17 S., R. 38 E., Section 28 SE¼SW¼	Fair 1991
	Antelope Reservoir	5277	T. 17 S., R. 38 E., Section 20 NE¼SE¼	NI
	Whiskey Gulch Spring	5278	T. 17 S., R. 37 E., Section 23 NE¼NE¼	CA
	Willow Basin Reservoir	5289	T. 18 S., R. 38 E., Section 8 NE¼NE¼	NI
	Mailbox Canyon Brush Control	5304	T. 17 S., R. 38 E., Section 26 SW¼SE¼	BLM
	Panhandle Brush Control	5305	T. 18 S., R. 40 E., Section 6 SE¼NW¼	BLM
	Indian Creek Brush Control	5306	T. 18 S., R. 39 E., Section 11 SW¼SE¼	BLM
	Willow Basin Brush Control	5307	T. 18 S., R. 38 E., Section 3 SW¼SW¼	BLM
	School Marm Spring	5357	T. 17 S., R. 38 E., Section 27 NE¼SE¼	CA
	Steam Spring	5358	T. 17 S., R. 38 E., Section 21 SW¼NW¼	NI
	Arther Spring	5360	T. 17 S., R. 38 E., Section 7 SW¼SE¼	NI
	Rye Spring	5361	T. 17 S., R. 37 E., Section 10 NE¼SE¼	NI
	Mahan Spring	5458	T. 17 S., R. 38 E., Section 28 SW¼NE¼	NI
Lava Ridge 10223	Jenkins Well	0480	T. 18 S., R. 40 E., Section 4 SW¼NE¼	CA
	John Smit Allotment Fence	0487	T. 18 S., R. 40 E., Section 2 SE¼SW¼	CA
	Lava Ridge Seeding	0961	T. 17 S., R. 40 E., Section 34 NW¼NW¼	BLM
	Jordan Reservoir	1020	T. 17 S., R. 39 E., Section 13 SE¼SE¼	CA
	Lava Ridge Seeding Protective Fence	1126	T. 17 S., R. 40 E., Section 28 NE¼NE¼	CA
	Becker Table Cattleguard	1852	T. 18 S., R. 40 E., Section 6 NE¼NW¼	BLM
	Indian Creek Division Fence	3768	T. 17 S., R. 40 E., Section 31 SW¼NW¼	NI
	Lava Ridge Division Fence	4112	T. 17 S., R. 40 E., Section 26 SW¼SW¼	CA Good
	Tyree Spring	4764	T. 17 S., R. 40 E., Section 26 NW¼SW¼	CA Good
	Smit Horse Pasture Fence	5093	T. 18 S., R. 40 E., Section 3 NW¼SW¼	CA
	North Bully Creek Reservoir	5282	T. 17 S., R. 40 E., Section 30 NE¼NE¼	Good
	East Lava Reservoir	5283	T. 17 S., R. 40 E., Section 35 SE¼SE¼	Good
	West Lava Ridge Reservoir	5284	T. 17 S., R. 40 E., Section 34 NE¼SW¼	not holding water
	North Bully Creek Division Fence	5535	T. 17 S., R. 40 E., Section 30 SE¼NW¼	Good

Allotment	Project	Job #	Location	Maintenance Responsibility
West Bench 20104				

¹CA: Cooperative Agreement with ranchers for maintenance of projects. At the time of the CA, projects were in useable condition

²BLM:

³NI: No information on condition of project

Table A-8. Proposed Projects

Allotment/ Number	Pasture #¹	Project Name	Location	Proposed Action	Target FY
Allotment #2 10201	02	Vegetation control	T19S R41E Sec. 24	Manipulate vegetation to reduce sagebrush while leaving a mosaic and increasing diversity for sage grouse habitat. Treat 400-500 acres in a mosaic pattern with a brush beater within the original 2000 acres seeding. Seed a mix of crested wheatgrass and forbs where necessary to establish a grassland.	2001+
	04	Windmill	T18S R42E Sec. 36	Construction including a solar pump.	2001
	04	Rehabilitate Annual Rangelands	T19S R42E Sec. 1,6 & 7	Manipulate vegetation to increase forbs and retain patches of sagebrush. Burn and seed 2,500 acres of annual rangeland with a mix of native grasses and forbs; retain patches of sagebrush.	2001+
	05	Bull Springs Pipeline Replacement	T18S R41E Sec. 13, NENE T18S R42E Sec. 7, SWSW	2 miles pipeline reconstruction/replacement.	1999
	05	Seeding Management	T17S R42E Sec. 15	Improve non-native seeding vigor and productivity while increasing grass and forb diversity to benefit wildlife, retaining shrub mosaic. Treat approximately 1600 acres in a mosaic pattern with a brush beater within the original 2000 acre seeding. A crested wheatgrass/forb mix will be seeded in areas having a sparse understory.	2001+
	06	Seeding Management	T18S R 41E Sec. 34	Improve non-native seeding vigor and productivity while increasing shrub and forb diversity. Consider reseeding a portion of the original seeding in the north. Use brush beater to remove sagebrush from approximately 500 acres of the original 600 acre seeding. Reseed with crested/forb mix where there is insufficient remnant plants.	2001+
	07	Rocke Riparian Pasture Fence and remove old fence.	T17S R42E Sec. 33,29,20	Combine three exclosure/holding pastures to make a riparian pasture.	1999
	07	Seeding Management	To be determined	Improve seeding vigor and productivity while increasing shrub and forb diversity. Treat 1000 acres of sagebrush in a mosaic pattern using a brush beater within the original 2593 acre seeding.	2001+
	08	Cottonwood Fire Rehab & NG Creek Exclosure		Maintain fences until vegetation controls and regrowth are initiated. Then consider fence removal or manage as riparian pasture. Note: Redband trout present.	2000
Allotment #3 10202	02	Pence Spring Reservoir Fence Reconstruction	T19S R40E Sec. 18, SWSE	Repair existing fence around reservoir and develop water gap for livestock.	1999
	02	Frog Riparian Fence	T19S R40E Sec. 15,16, 21, 22,28	Protects extensive riparian areas and creates a riparian pasture once riparian potentials are determined.	1999

Allotment/ Number	Pasture # ¹	Project Name	Location	Proposed Action	Target FY
	04	Cottonwood Creek Storage Tank	T19S R41E Sec. 4	Reconstruction & maintenance.	2001
	04	East Cottonwood Pasture Fence	T19S R41E Sec. 33, 34	0. 5 mile division fence construction.	2001
	05	Allotment #3 Reservoir Fence Reconstruction	T19S R40E Sec. 12	Fence reservoir and develop water gap for livestock.	1999
	05	West Cottonwood Pasture Fence	T18S R40E Sec. 35	0. 5 mile division fence construction.	2001
	06	Spring Protection	T19S R39E Sec. 19	Protect spring & remove stock tank from tributary to Cottonwood Creek.	2000
	08	Zotto Reservoir	T19S R40E Sec. 15, SESE	Repair existing reservoir exclosure and develop water gap for livestock.	1999
	06, 09, 10, 11 12-17	Vegetation control	T19S R39E Sec. 3,10 T19S R39E Sec. 5 T19S R39E Sec. 3, 10	Control invading juniper and rejuvenate decadent mountain sagebrush on 640 acres by cutting and prescribed burns in two portions of North Studhorse and the northwest edge of South Gregory Creek pastures.	2001
Rail Canyon 10205	04	Kitten Canyon Pasture Fence	T16S R38E Sec. 32,33,34	3 miles (including 1 mile in WSA) division fence construction.	2001
		Kitten Canyon		Control invading juniper	
	05,06	Fire projects- Barb's email			
	09	Allotment Fence	T17S R39E Sec. 13, NWNE	1 mile allotment division fence construction.	2001
Richie Flat 10214	01	Ridge Road Reservoir Projects	T17S R40E Sec. 26, NWSW	See description for Lava Ridge Allotment.	1999
	01	Seeding Management	To be determined	Improve non-native seeding vigor and productivity while increasing shrub and forb diversity.	2001+
	02, 04, 05	Vegetation control	To be determined	Consider control measures for invading juniper (low priority).	2005+
Brian Creek 10215	01	Pasture Fence	T16S R41E Sec. 5	3.5 miles division fence construction.	1999

Allotment/ Number	Pasture #¹	Project Name	Location	Proposed Action	Target FY
	01	Mountain Spring 1 Mountain Spring 2 Mountain Spring 3 Mountain Spring 4 Mountain Spring 5 Mountain Spring 6	T17S R41E Sec. 8, NWNE T17S R41E Sec. 4, NWSW T17S R41E Sec. 4, NWNW T17S R41E Sec. 33, SWSW T17S R41E Sec. 33, SWNW T17S R41E Sec. 33, SENW	Construct pipelines and troughs to draw livestock off of stream. Obtain better distribution of livestock and reduced pressure on riparian areas.	1999
	01	Mountain Pasture		Control invading juniper	
	02, 03	NG Seeding Pastures Brush Control	T17S R41E Sec. 7, 12, 13	Improve diversity of grasses and forbs in the seeding. Brush beating followed by reseeding after early season use. Pasture 02: Use brush beater in North NG Pasture to remove sagebrush canopy on 900 of the 1171 acre original seeding. Add crested/forb seed mix where necessary Pasture 03: Use a brush beater to remove sagebrush canopy from approximately 600 acres of the original 700 acre seeding. Add a mix of crested wheatgrass and forbs where necessary.	2000/ 2001
Buckbrush 10218	01	Seeding Management	To be determined	Improve seeding vigor and productivity & increase shrub and forb diversity. Use brush beater to remove the sagebrush canopy from 700 acres of the original 850 acre seeding. Add a mix of crested wheatgrass and forbs where necessary.	2001+
	02	Pasture Division Fences (2)	T17S R41E Sec. 3 T16S R41E Sec. 28, 34, 35	2.5 miles west/east fence construction. 2.5 miles north/south fence construction.	1999
	01, 03	Rehabilitate Annual Rangelands	T18S R41E Sec. 4, 9, 23 T17S R41E Sec. 11,23,26	Potential candidates for conversion of annual rangelands. Burn and seed 640 acres in Buckbrush Seeding Pasture and 640 acres in Turnout Pasture to rehabilitate annual rangeland. Use a mix of native grasses and forbs.	2001+
Westfall Allotment 00227	01	Westfall Seeding		Burn and seed 1280 acres of annual rangelands with a mix of native grasses and forbs. Retain patches of sagebrush	

Allotment/ Number	Pasture #¹	Project Name	Location	Proposed Action	Target FY
Willow Basin 10222	01 07, 08	Vegetation control	T18S R38E Sec. 1,2, 12 T18S R38E Sec. 11,14 T17S R37E Sec. 1,6,12,13	Rejuvenate mature sagebrush stands and increase vegetation diversity. Use prescribed fire and cutting to control invading juniper on 600 acres of uplands to increase grassland openings in the mature sagebrush community. Pastures 07 and 08: Rejuvenate mature aspen stands and reduce invading juniper. Use prescribed fire and cutting to treat 200 acres in Willow Basin Pasture and 3000 acres in Bully Creek Pasture for juniper invasion and improvement of mountain sagebrush, aspen and riparian communities.	2001+ 2000+
	08	Pasture fences	To be determined	To be determined.	2001+
Lava Ridge 10223	01	Pasture Fence	T16S R40E Sec. 3, 4 T17S R40E Sec. 34	2 miles north/south pasture division fence construction.	1999
	01	Allotment Fence	T17S R40E Sec. 3, 10	2 miles east/west allotment/pasture boundary fence construction.	1999
	01	Pipeline Extension and Trough Construction	T16S R40E Sec. 33, NENE	0.5 mile extension from private to public lands; trough construction.	1999
	01	Vegetation Control		Control invading juniper	
	02	Ridge Road Reservoir Fence Reconstruction	T17S R40E Sec. 26, NSW	Reconstruct existing reservoir fence in East Lava Seeding (Lava Ridge Allotment) and South Ridge (Richie Flat Allotment).	1999
	02	Spring Box, fence, pipeline and trough construction	T17S R40E Sec. 26, NSW	At Ridge Road Reservoir, construct new fence, spring box, pipeline and trough.	1999
	02, 03	East & West Lava Seedings Brush Control	T18S R40E Sec. 2 T17S R40E Sec. 34	Improve diversity of grasses and forbs in the seeding (particularly valuable in West Lava Seeding). Use brush beater to remove sagebrush in a mosaic pattern from approximately 900 acres of the original 1000 acre seeding. Add crested wheatgrass and forb mix where necessary. Construct approximately 1½ miles of fence to divide native and seeded portions of the two pastures.	2000/ 2001
West Bench 20104	01	Rehabilitate Annual Rangelands	T18S R43E Sec. 26,27	Potential candidates for conversion of annual rangelands. Burn and seed 640 acres of annual rangeland with a mix of native grasses and forbs. Retain patches of sagebrush.	2001+

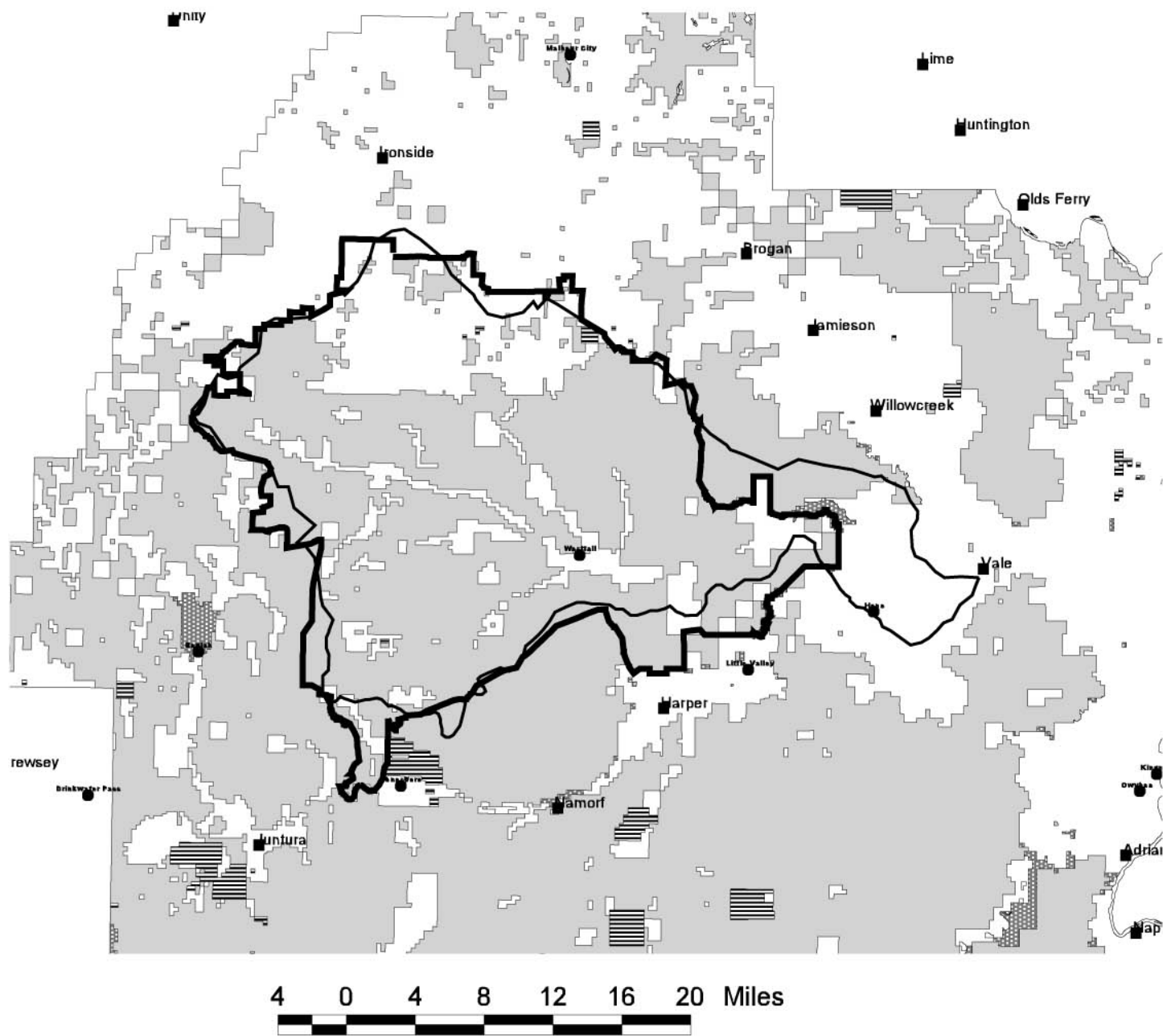
¹ Pasture numbers and names are located in Appendix C.

Appendix B

General Overview Maps

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Map B-3 Bully Creek Landscape Area Roads and Drainages	B-4
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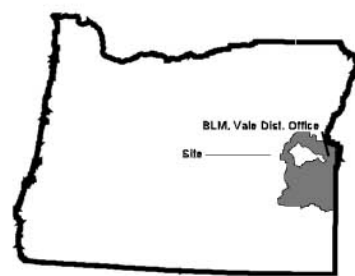
Map B-1. Bully Creek Landscape Area and Ownership

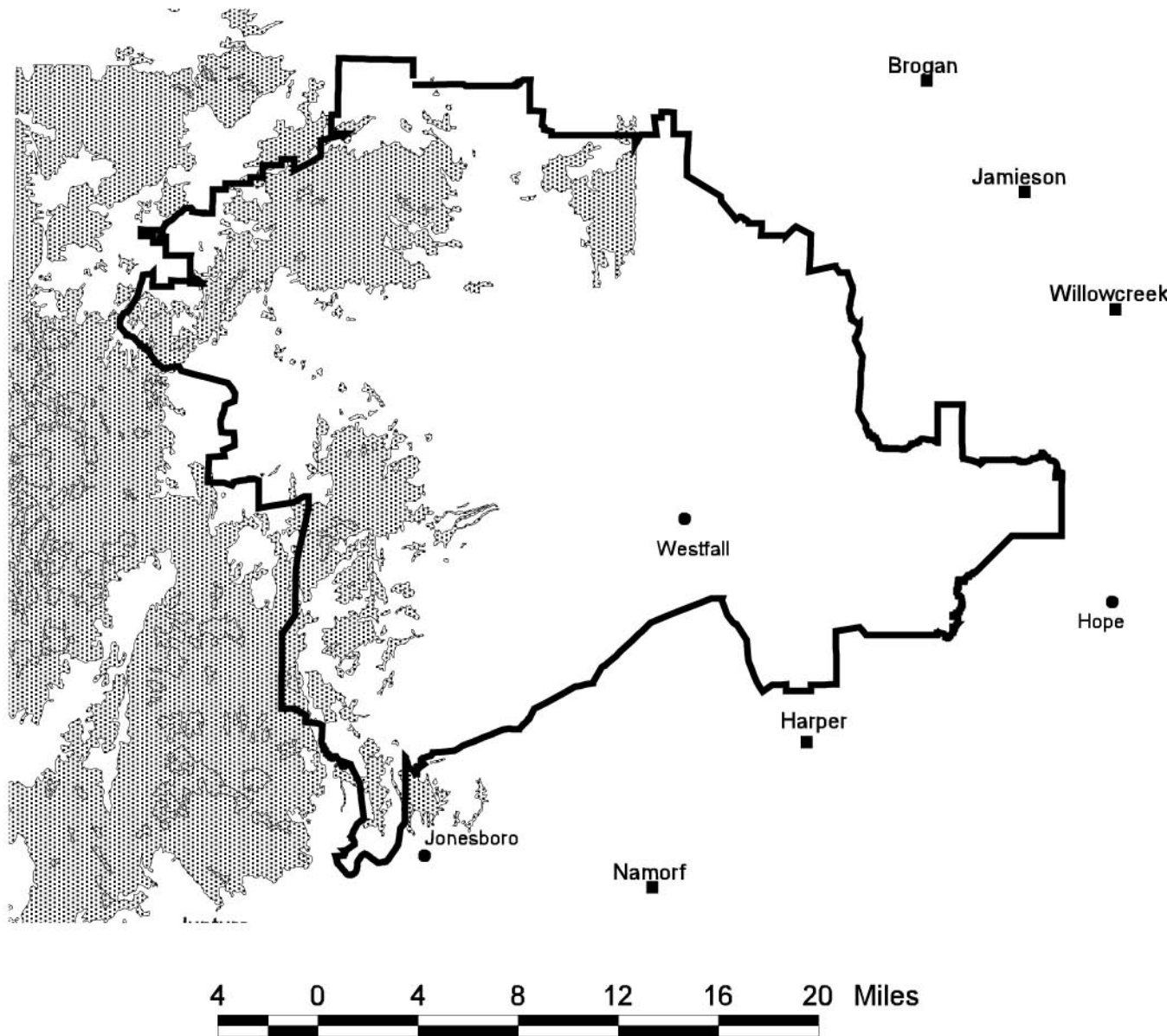


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Map Legend

- Places
- Cities
- ▭ Subbasin Boundary
- ▭ Landscape Area
- Ownership**
- ▨ BOR
- BLM
- Private
- ▨ State





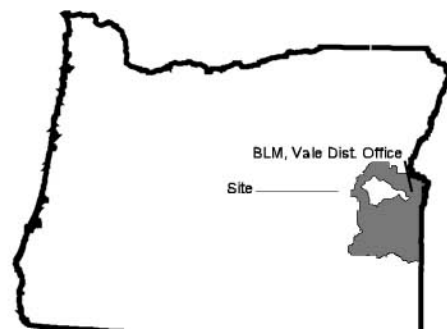
Map B-2. Bully Creek Landscape Area
Juniper Coverage

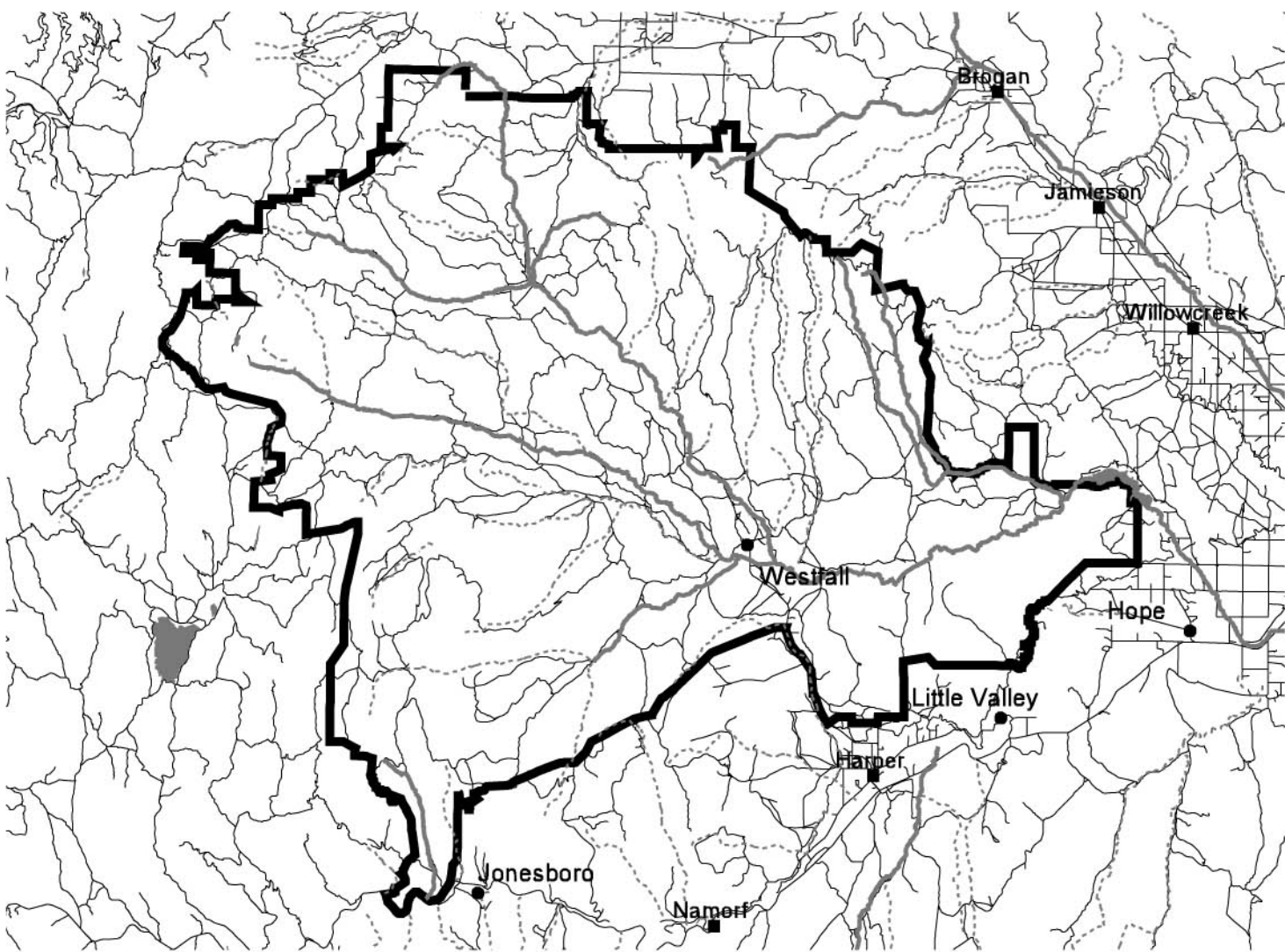


Map Legend

- Places
- Cities
- ▨ Juniper
- ▭ Landscape Area

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were

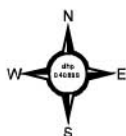




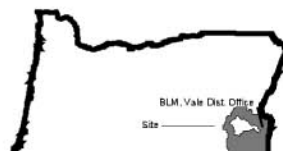
Map B-3. Bully Creek Landscape Area
Roads and Drainages

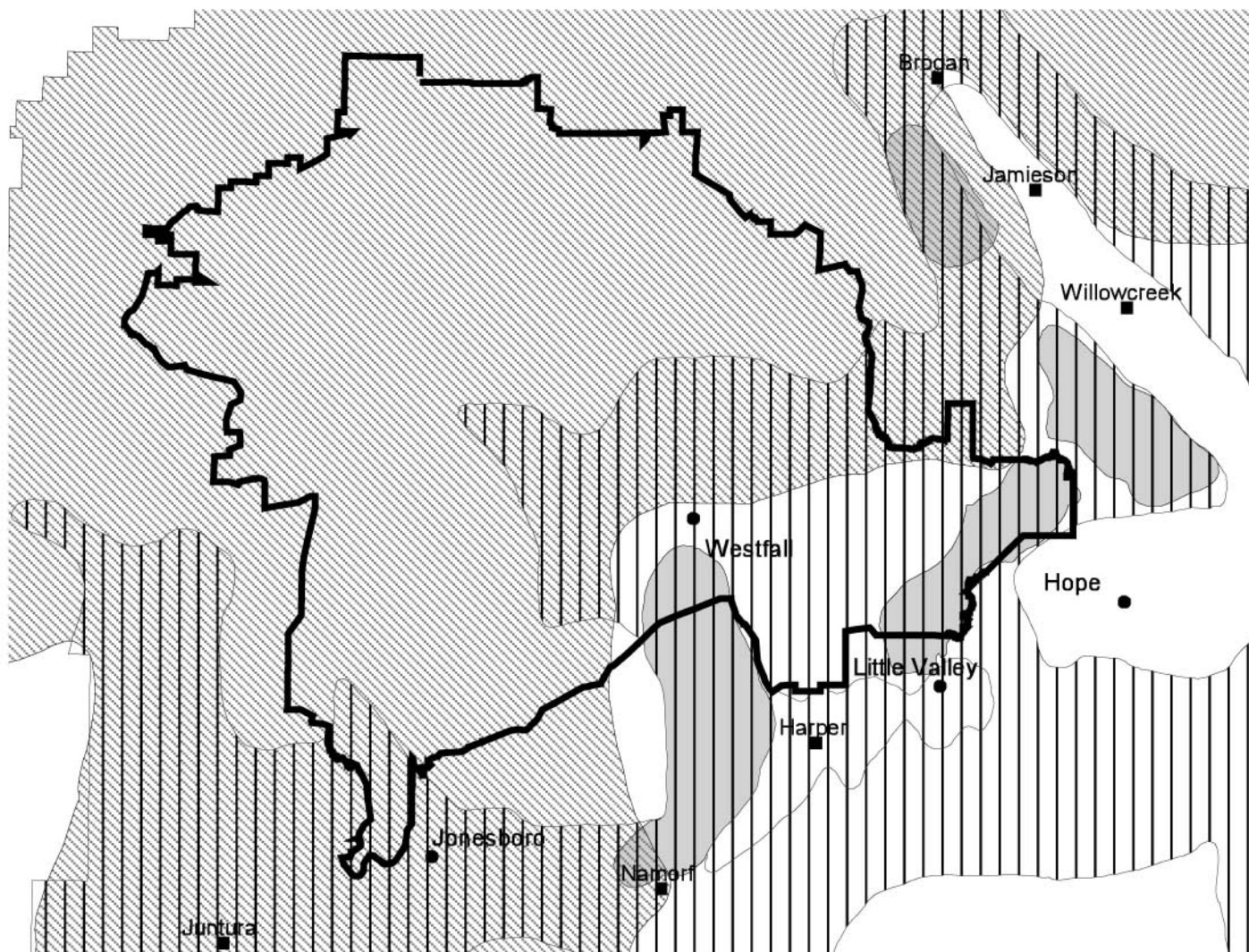
Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Surface Water
- Roads
- Landscape Area

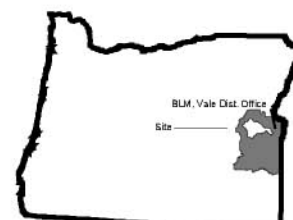
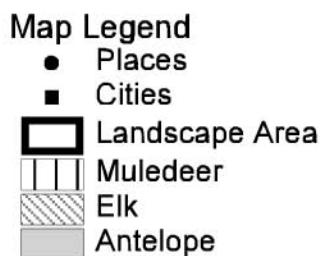


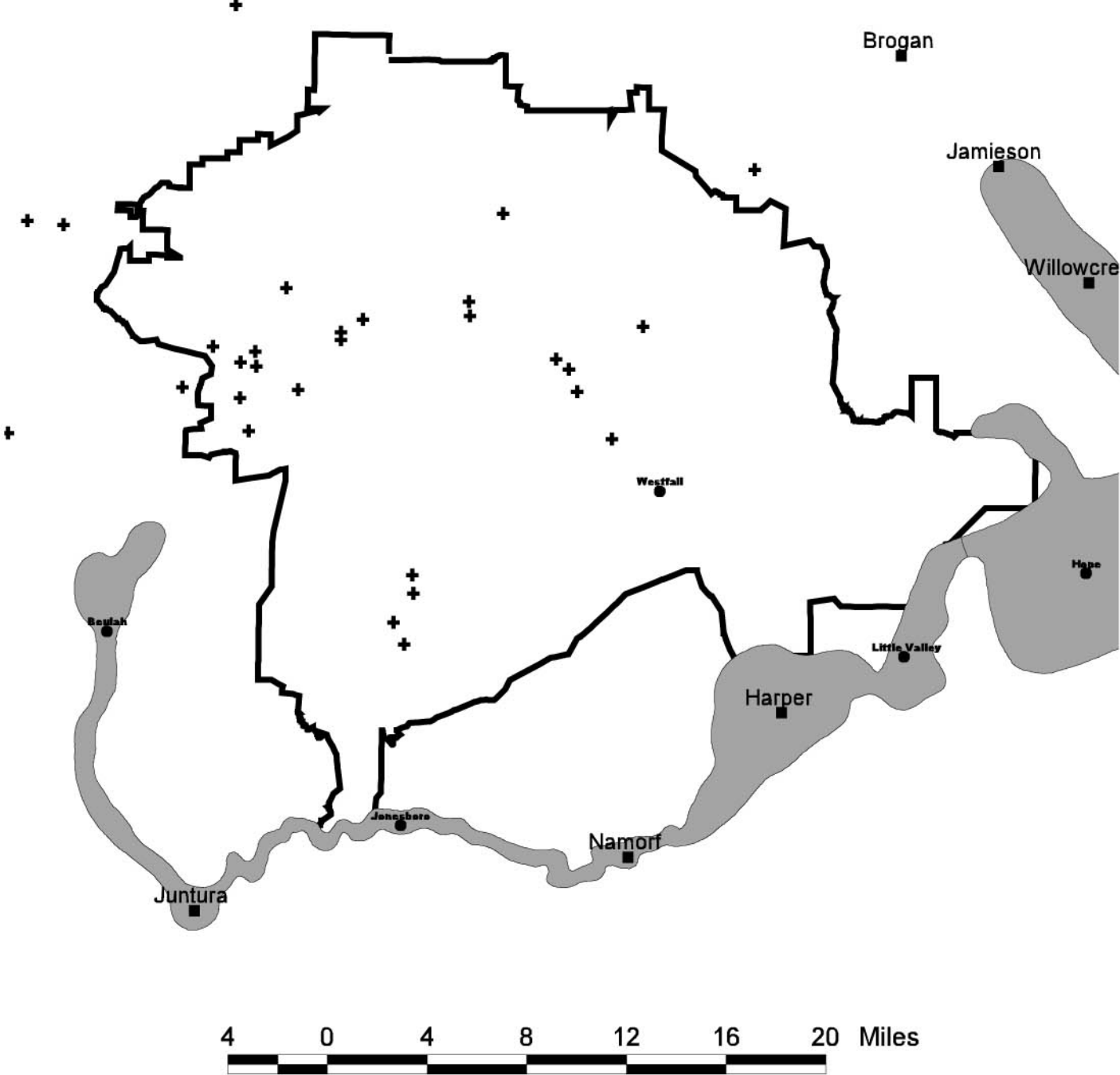
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Map B-4. Bully Creek Landscape Area
Wildlife Species





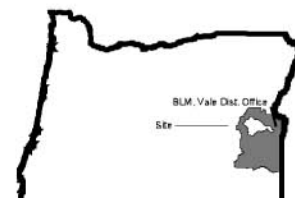
Map B-5. Bully Creek Landscape Area
Special Status Species

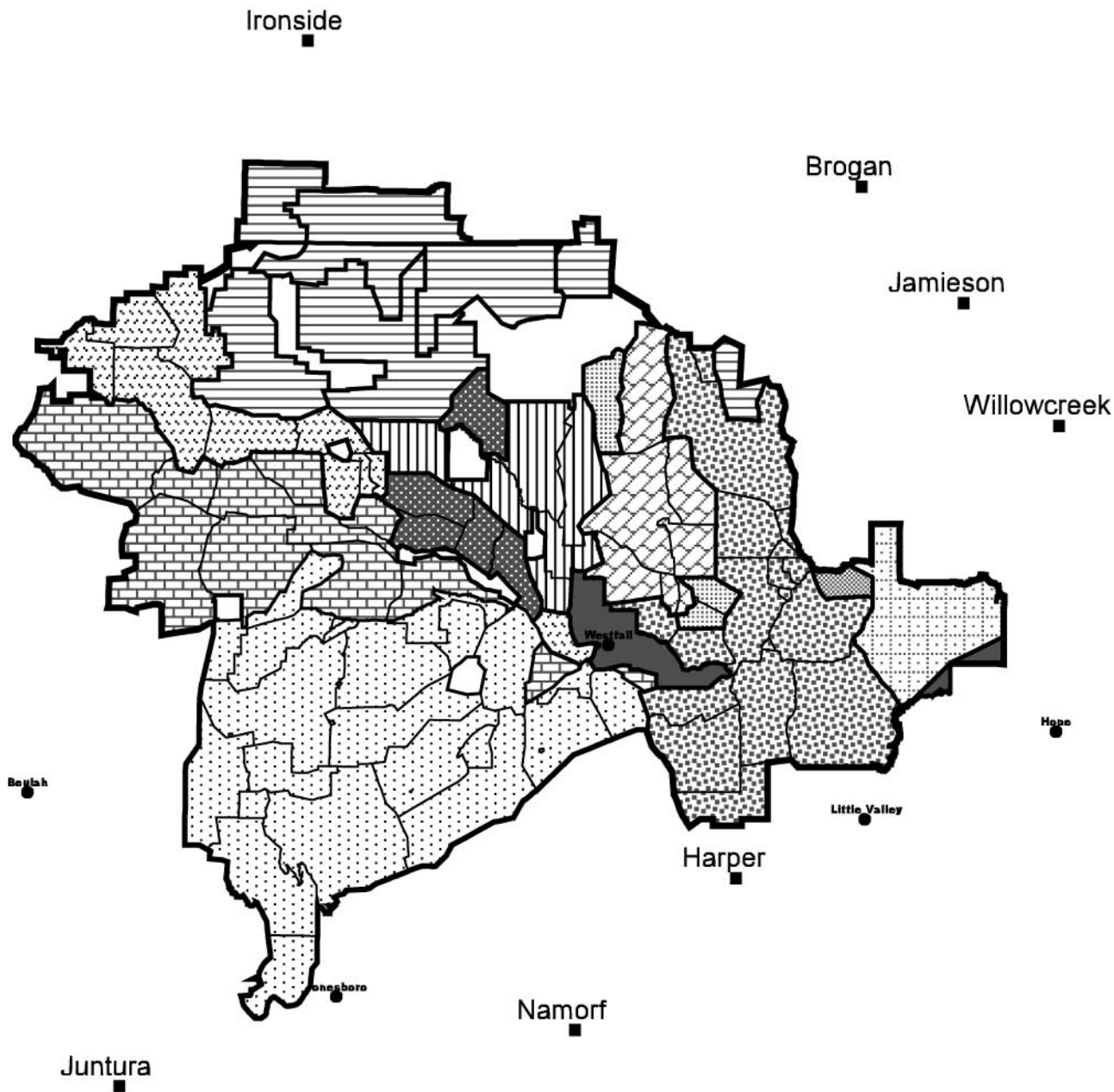


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Map Legend

- Places
- Cities
- + Sage Grouse Lek Location
- Bald Eagle
- Landscape Area

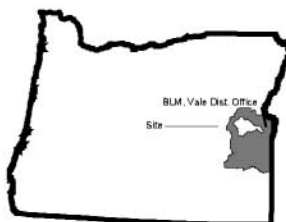




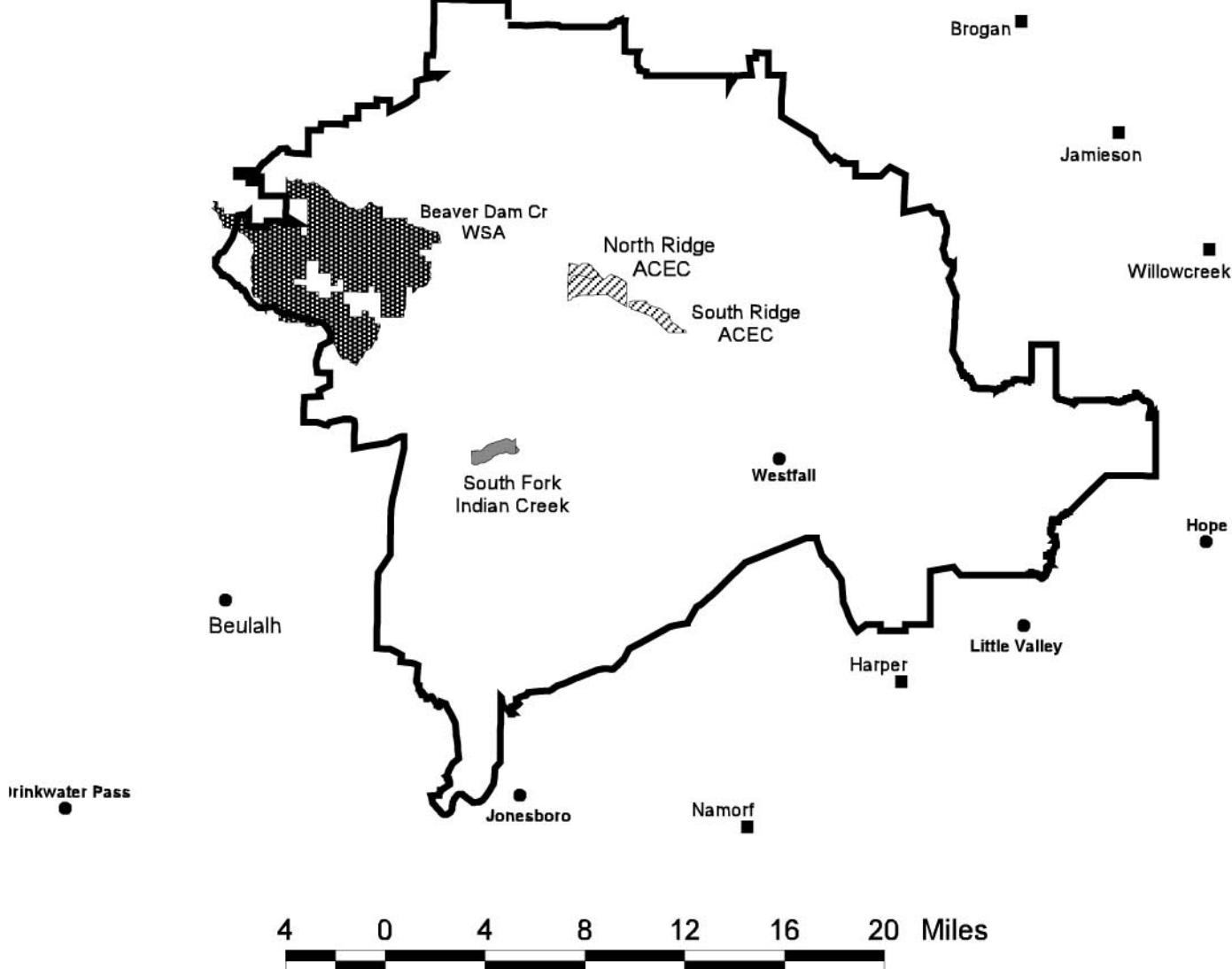
Map B-6. Bully Creek Landscape Area
Allotments and Pastures



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- Places
- Cities
- Pastures
- ▨ Bully Creek 00132
- ▩ Westfall 00227
- ▧ Cottonwood Cr 10140
- ▦ Allotment 2 10201
- ▥ Allotment 3 10202
- ▤ Rail Canyon 10205
- ▣ Richie Flat 10214
- ▢ Brian Creek 10215
- Buckbrush 10218
- Willow Basin 10222
- ▤ Lava Ridge 10223
- ▣ West Bench 20104
- ▢ C Allotments
- Landscape Area

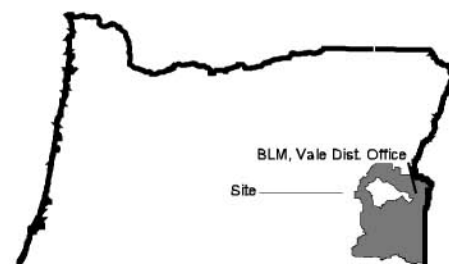


Map B-7. Bully Creek Landscape Area
Special Management Areas



- Map Legend**
- Places
 - Cities
 -  Potential ACECs
 -  South Fork Indian Creek
 -  Beaver Dam Creek WSA
 -  Landscape Area

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Appendix C

Allotment/Pasture Characterizations and Grazing Schedules

APPENDIX C

Allotment/Pasture Characterizations and Grazing Schedules

Table of Contents

Acronyms and Abbreviations

I&M Allotments

Name	Number	Page
Bully Creek	00132	6
Cottonwood Creek	10140	9
Allotment #2	10201	12
Allotment #3	10202	20
Rail Canyon	10205	30
Richie Flat	10214	36
Brian Creek	10215	41
Buckbrush	10218	45
Westfall	00227	45
Willow Basin	10222	50
Lava Ridge	10223	56
West Bench	20104	60

C Allotments

Boston Horse Camp	00113	63
Juniper Mountain	00134	63
Cow Creek Individual	00144	63
Scratch Post Butte	00228	64
Post Creek Individual	00244	64
Ferriers Gulch	10141	64
Clover Creek Individual	10210	65
West Clover Creek	10213	65

ACEC - Area of Critical Environmental Concern
 AMP - Allotment Management Plan
 AUM - Animal Unit Month
 C Allotment - Custodial
 D - Downward trend
 DRFC - Desired Range of Future Condition
 FAR - Functioning at risk
 FARD - Functioning at risk with downward trend
 FARN - Functioning at risk with not apparent trend
 FARU - Functioning at risk with upward trend
 FFR - Fenced Federal Range
 FY - Fiscal Year
 I Allotment - Improve
 M Allotment - Maintain
 MFP - Management Framework Plan
 MRA - Malheur Resource Area
 N - No
 NA - Not applicable
 ND - No data
 NF - Non functional
 NR - No riparian present
 ODEQ - Oregon Department of Environmental Quality
 ODFW - Oregon Department of Fish and Wildlife
 PFC - Proper functioning condition
 RNA - Research Natural Area
 RSEX - Reservoir exclosure
 S - Static trend

SD - Static to downward trend

SEORMP - Southeastern Oregon Resource Management Plan

SU - Static to upward trend

SRH - Standards For Rangeland Health

Standards For Rangeland Health 1: Watershed Function/Uplands -

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate and landform.

Standards For Rangeland Health 2: Watershed Function/Riparian-

Wetland Areas - Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate and landform.

Standards For Rangeland Health 3: Ecological Processes - Healthy,

productive and diverse plant and animal populations and communities appropriate to soil, climate and landform are supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle.

Standards For Rangeland Health 4: Water Quality - Surface water

and groundwater quality, influenced by agency actions, complies with State Water Quality Standards.

Standards For Rangeland Health 5: Native, T&E and Locally Important

Species (Wildlife) - Habitats support healthy, productive and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and landform.

STEX - Stream enclosure: excluded from livestock grazing

U - Upward trend

WSA - Wilderness Study Area

Y - Yes

Data Review Process

The following is a characterization of all I, M and C category allotments within the landscape area. The characterizations are based on data collected during the 1998 field season and other existing and historic data known and/or collected during past inventory and monitoring efforts. Management actions (LAMP Section VII, Tables 8 and 9) and LAMP (allotment/pasture) objectives were developed from issues of concern, Standards for Rangeland Health (SRH) and trend. Data collected for the SRH which indicated less than properly functioning condition was determined not to meet the standard. All data and assessment summaries are on file in the Vale District.

The Five-Step Process

- 1 - What are the past management objectives?
Have objectives been met?
- 2 - Are we meeting the SRH?
Yes ... then move to step 3
No ... then why (identify probable/potential causes and effects)
- 3 - What is upland trend? What is riparian trend?
Identify any problems/concerns
- 4 - What are the Issues of Concern?
- 5 - Are past allotment/pasture specific objectives still applicable? Do new objectives need to be added?

How to Read the Tables in Appendix C

Allotment Name & Number ¹

Operator name ²

Active AUMs ³

Suspended AUMs ⁴

Exchange of Use ⁵

Season of Use ⁶

¹ An allotment name and number is given to an area of land designated and managed for grazing of livestock.

² The operator name identifies the individual(s) with a grazing preference and livestock grazing permit in the given allotment.

³ An active AUM (animal unit month) means the amount of forage necessary for the sustenance of one cow or its equivalent for a period of 1 month.

⁴ Suspended AUMs refers to the temporary withholding from active use, through a decision issued by the authorized officer or by agreement, of part or all of the permitted use in a grazing permit or lease.

⁵ Exchange of use is an agreement that may be issued to an operator who owns or controls lands that are unfenced and intermingled with public lands in the same allotment when use under such an agreement will be compatible with the existing livestock operations. An exchange of use grazing agreement may be issued to authorize use of public lands to the extent of the livestock carrying capacity of the lands offered in exchange of use. No fee is charged for this grazing.

⁶ Season of use refers to the operator's authorized beginning and ending dates of grazing use by allotment.

Pasture ¹	Standards for Rangeland Health ²									Trends ⁸		
	1 ³	2 ⁴					3 ⁵	4 ⁶	5 ⁷	Upland Long-term ⁹	Upland Short-term ¹⁰	Riparian Overall ¹¹
		PFC	FARU	FARN	FARD	NF						
		----- (miles) -----										

¹ Data collected for standards for rangeland health are reported on a pasture by pasture basis. All pastures are listed for the above table.

² The Standards for Rangeland Health are based on the Fundamentals of Rangeland Health. These fundamentals combine the basic precepts of physical function and biological health and elements of law relating to water quality, and plant and animal populations and communities. Standards are expressions of the physical and biological condition or degree of function necessary to sustain healthy rangeland ecosystems. The five standards are defined below. When more than one assessment was recorded in a pasture the seeding assessment is reported first, followed by the assessment for the native portion. A third assessment rating shows that an additional location was evaluated, usually native range.

³ Standard 1 assesses whether the upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform. Ratings are reported as proper functioning condition (PFC), functioning at risk upward (FARU), functioning at risk downward (FARD), non-functioning (NF), or no data (ND).

⁴ Standard 2 assesses whether riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform. Ratings of PFC, FARU, FARN, FARD and NF are reported in riparian stream miles.

⁵ Standard 3 assesses whether healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle. Ratings are reported the same as for Standard 1.

⁶ Standard 4 assesses whether surface water and groundwater quality, influenced by agency actions, complies with State water quality standards. Ratings for Standard 4 were derived using input from ratings for Standards 1, 2, and 3. For Standards 1 and 3 the ratings were reported as Y (Yes) or N (No) if not meeting standards.

⁷ Standard 5 assesses whether habitats support healthy, productive, and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate, and landform. Ratings are reported the same as for Standards 1 and 3.

⁸ Trends refer to the direction of change in ecological indicators observed over time.

⁹ Upland long-term trend refers to a comparison between the first data reading and the most current reading (1998). Trend is described here as upward (U), downward (D), static (S), static to upward (SU), static to downward (SD), not apparent (NA), or no data (ND).

¹⁰ Upland short-term trend refers to a comparison between the last reading and the most current reading (1998). Trend is described the same as for upland long-term trend.

¹¹ Overall riparian trend was determined by comparing aerial photos, ground photo points and using professional judgement (see p. 25).

Pasture ¹	Reason for not meeting Standards 1-5 ²		Allotment Management Plan Grazing Schedule ⁵			Proposed Grazing Schedule ⁶		
	Caused by Current Grazing ³	Caused by Other Factors ⁴	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3

¹ Pastures included in this table are less than the total pastures in the allotment for different reasons. For example some pastures are not part of the identified grazing system, some are exclosures, and others may be classified as Fenced Federal Range. Fenced Federal Range are non-intensive management areas or custodial pastures where BLM does not specify livestock numbers, kinds of animals and period of use provided that detrimental impacts do not occur to public lands. FFR areas consist of small tracts of public land that intermingle with large tracts of private land. Capability for grazing management is limited and little public resource values exist.

² Reasons for not meeting Standards 1-5 identifies if the current grazing system was determined to be the cause of failing to meet the Standard in a pasture.

³ Caused by Current Grazing identifies which Standards (1-5) failed to meet PFC due to the current grazing practices. Current grazing is defined below. Upon determination, through assessment or monitoring by experienced professionals and /or interdisciplinary teams, that existing grazing management needs to be modified to fulfill the Fundamentals of Rangeland Health, the authorized officer shall take appropriate action as soon as practical, but not later than the next grazing year.

⁴ Caused by Other Factors identifies which Standards (1-5) failed to meet PFC due to a factor other than the current grazing practices, including historical grazing practices.

⁵ Current Grazing Schedule defined here refers to the grazing system as defined in the AMP or revised by the AMP Evaluation.

⁶ Proposed Grazing Schedule refers to the grazing schedule as implemented by the LAMP. Adjustments were made within pastures not meeting Standards 1-5 in order to make progress towards meeting the Standards.

Bully Creek Allotment 00132

Allotment Summary: No past allotment evaluations have been completed for this allotment.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
80	200	25	50	5	5

Source: SEORMP Appendix E

Past Objectives: Past objectives recommended winter browse improvement and increasing the palatable browse species reproduction by 20% from the existing 5% by 1990. The long term objective (by 1997) was to attain late or climax condition on a majority of the area in each pasture (1982 AMP).

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (improve) and upland (maintain) objectives.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
J.R. Land & Livestock	980	0	253	3/1-4/15; 10/15-12/15

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		-----(miles)-----										
Bully Creek	PFC						PFC		ND	SU	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Bully Creek			3/1-4/15 10/15-12/14	3/1-4/15 10/15-12/14	3/1-4/15 10/15-12/14	10/15-12/14 3/1-4/15	10/15-12/14 3/1-4/15	10/15-12/14 3/1-4/15

Pasture Summary:

Bully Creek (01)

The upland watershed function and ecological processes are in properly functioning condition. The condition of wildlife habitats are unknown. This pasture is critical deer and pronghorn winter range. Lack of bitterbrush recruitment may be due to past livestock use (ODFW, personal communication 1999). The long-term upland trend has shown a slight improvement. Annual rangelands, deer and antelope spring and winter range, particularly in the middle of the pasture near Bully Creek Reservoir are issues of concern.

insert Map C-1: Bully Creek Landscape Area Bully Creek Allotment 00132

Cottonwood Creek Allotment 10140

Allotment Summary: This allotment, consisting of one pasture, is managed with the Cottonwood Mountain Allotment (20102). It was evaluated with the Cottonwood Mountain Allotment in 1989.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
50	125	5	10	5	30

Source: SEORMP Appendix E

Past Objectives: The past objective was to improve the riparian areas. Condition class was identified as early (1990 AMP).

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply riparian (maintain) and upland (maintain) objectives.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Tom McElroy	38	49	ND	Winter/early spring

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		----- (miles)-----										
Cottonwood Creek	PFC	0.25					PFC	Y	ND	ND	ND	SU

Grazing Schedule

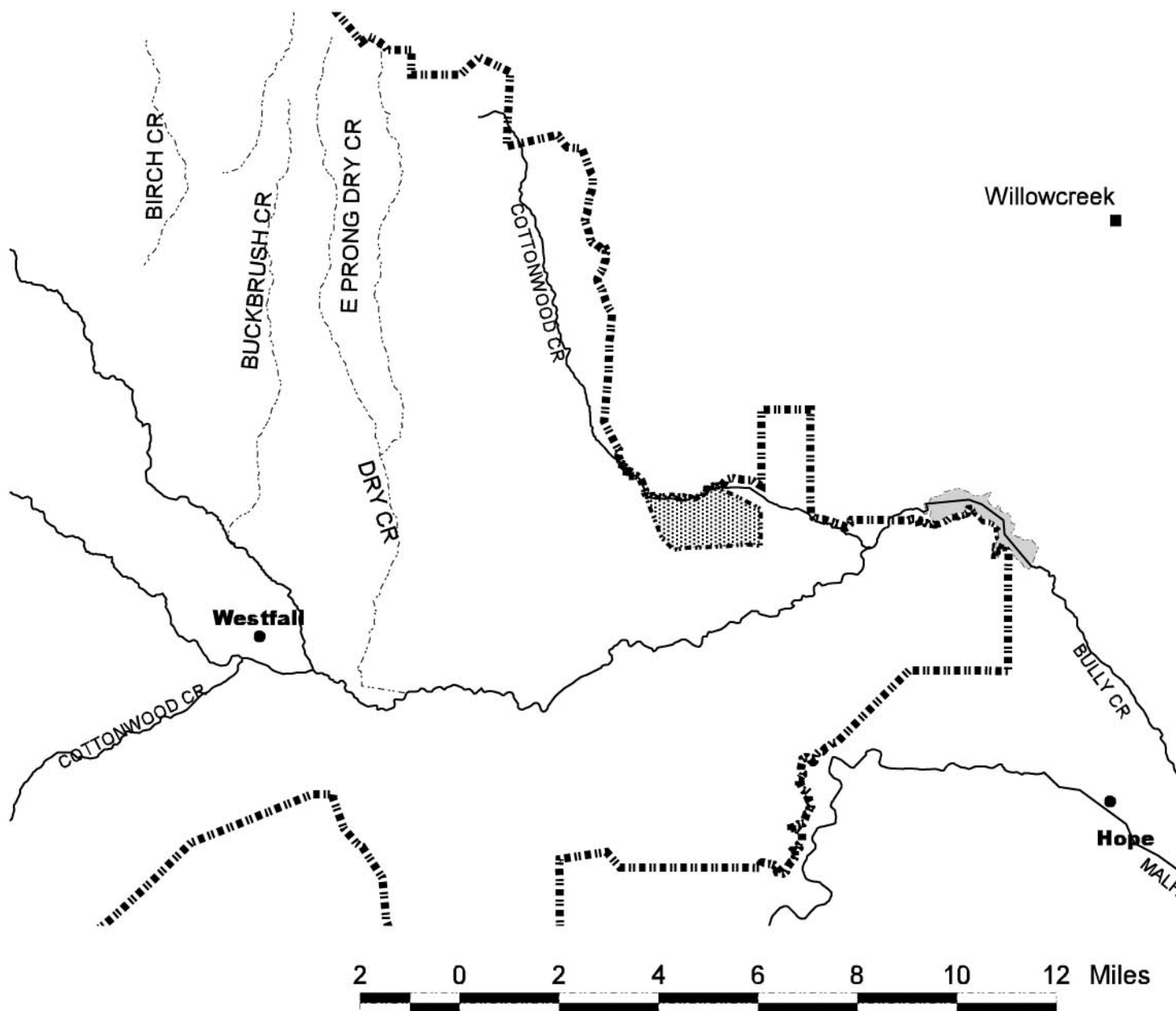
Bully Creek LAMP Appendix C

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Cottonwood Creek			winter/early spring	winter/early spring	winter/early spring	continue current grazing		

Pasture Summary:

Cottonwood Creek (01)

The riparian watershed functions are properly functioning in an early seral stage. Information regarding the condition of other SRH are unknown. Riparian trend and SRH indicate that the pasture is meeting the riparian objective.



Map C-2. Bully Creek Landscape Area
Cottonwood Creek Allotment 10140

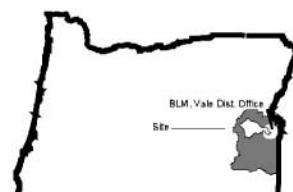


Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Surface Water
- Cottonwood Creek Allotment 10140



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Allotment #2 (10201)

Allotment Summary: Evaluations of this allotment were conducted in 1988 and 1994. Since the last evaluation in 1994, the livestock operators have chosen not to run at full Active AUM levels. Analysis of the current data collected needs to take this point into consideration when drawing conclusions. Trends in the riparian areas have been and are an ongoing issue. The downward riparian trend in North Bully Creek pasture has been reversed since the last evaluation in 1994. Trends and condition of seedings and the lower elevation native ranges also remain problematic.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
200	400	10	40	15	50

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Indian Creek Ranch	4551	819	0	4/1-10/31
Ted Linville	205	5	98	4/1-10/31
JR Land & Livestock	2724	493	0	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
Mesa Brush Control	PFC						FAR		NF	D	SD	NR
Harper Seeding	PFC/PFC						FAR/PFC		FAR/PFC	D	D	NR
North Bully Creek	NF	3.25	0.25				NF	N	FAR	S	S	U

Pasture	Standards for Rangeland Health									Trends		
Wildhorse	FAR/PFC						FAR/FAR		ND	SU	SU	NR
South NG Seeding	FAR						FAR		FAR	D	SU	NR
Bully Creek Seeding	FAR						FAR		FAR	D	S	NR
North NG Seeding	FAR/PFC	1.25	1.25				FAR/FAR	N	PFC/FAR	D	S	ND
Mountain	PFC/PFC	1.5	1	4.5	3.75	0.75	PFC/PFC	N	PFC/PFC	SD	SD	S, SD
NG Creek Riparian Exclosure	ND				1.25		ND	N	ND	ND	ND	D
Cottonwood Wildlife STEX	ND		1				ND	N	ND	ND	ND	ND
Holding	FAR						FAR		FAR	ND	ND	NR
Dry Creek	PFC/FAR						PFC/FAR		FAR/FAR	ND	ND	NR
Jordan FFR	ND						ND		ND	ND	ND	NR
FFR	ND		0.75				ND	N	ND	ND	ND	U
Bull Spring REX	ND						ND		ND	ND	ND	NR
NG Wildlife Area	ND						ND		ND	ND	ND	NR
NG Holding	ND		0.5				ND	N	ND	ND	ND	ND
Cottonwood Fire Rehab EX	ND		0.5				ND	N	ND	ND	ND	S
North Bully Holding	FAR						FAR		FAR	ND	ND	NR
0201 Riparian STEX	FAR	1.0					FAR	N	FAR	ND	ND	U

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Current Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Mesa Brush Control		3, 5	5/1-6/30	9/15-10/31	5/1-6/15	7/15-10/31	5/1-7/1	7/1-9/1
Harper Seeding		3, 5	5/1-6/30	9/15-10/31	5/1-6/1/5	7/15-10/31	5/1-7/1	7/1-9/1
North Bully Creek		1, 2, 3, 5	4/15-5/15	4/15-5/15	4/15-5/15	4/1-5/15	4/1-5/1	5/1-7/1
Wildhorse		1, 3	5/16-6/30	10/1-10/15	5/16-6/15	7/15-10/31	5/1-7/1	7/1-8/15
South NG Seeding		1, 3, 5	9/1-10/31	5/1-6/30	9/1-10/31	7/15-10/30	7/1-9/1	5/1-7/1
Bully Creek Seeding		1, 3, 5	4/1-4/30	4/1-4/30	4/1-4/30	7/15-10/30	7/1-9/1	4/1-5/1

Pasture	Reason for not meeting Standards 1-5		Current Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
North NG Seeding		1, 2, 3, 5	10/1-10/15	5/16-7/1	10/1-10/15	4/1-5/15	4/1-5/1	5/1-7/1
Mountain	2		7/1-9/30	7/1-10/15	6/16-9/30	5/15-7/15	9/1-10/31	9/1-10/31
Holding		1, 3, 5	4/1-4/30	4/1-4/30	4/1-4/30	4/1-5/15	7/1-9/1	4/1-5/1
Dry Creek		1, 3, 5	4/1-4/30	4/1-4/30	4/1-4/30	4/1-5/15	7/1-9/1	4/1-5/1
Rocke		2	ND	ND	ND	4/1-5/15	7/1-9/1	4/1-5/1

Pasture Summaries:

Pasture: Mesa Brush Control (01)/ Harper Seeding (02)

The Harper seeding is managed with Mesa Brush Control as one pasture. The fence once dividing the pastures has been removed.

Past Objectives: Maintain late ecosite condition.

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs in the native portion of the Harper seeding area and to attain late ecological condition or DRFCs in the rest of the pasture. Apply wildlife (improve), upland (improve) objective and seeding #2 objectives.

Data Summary: The upland watershed function is in or making significant progress toward properly functioning condition. Trend studies indicate that this pasture is not meeting the upland objective. Both long-term and short-term seeding trend is down in the Harper seeding portion of the pasture. Ecological processes are not functioning properly in the sprayed portion of Mesa pasture due to historic livestock use (particularly from 1982 to 1987). Even though the pasture has been used only four times since 1990, the ecological condition is not improving. Whitetop and bur buttercup are dominating some areas due to a decreasing forb understory, and annual rangeland species (medusahead, cheatgrass) are increasing. Wildlife habitats range from

functioning where there are small portions of remnant native range to functioning-at-risk in transitional areas below the mesa with little forb/shrub diversity to not functioning at the top of the mesa where there are big flats dominated by whitetop, cheatgrass and other nonnative species. Annual rangelands (Medusahead rye), weeds, recreation (OHV use), special status species plants and deer winter range are issues of concern.

Pasture: North Bully Creek (03)

Past Objectives: Improve early ecological condition to middle ecological condition within 15 years. Improve riparian management on Bully Creek.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve), riparian (maintain) and upland (improve) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly due to historic grazing which resulted in sagebrush monocultures without grass/forb understory, exposed soils and increasing populations of weedy species. Upland trends are not moving toward meeting the upland objective. Riparian watershed function is functioning properly in an early seral stage. A small tributary to Bully Creek needs improvement. Bully Creek, from

the reservoir to Westfall, is a 303(d) listed stream and, as such, is not properly functioning in terms of water quality (bacteria). Annual rangelands and wildlife (herbaceous understory is not adequate of deer and pronghorn) are issues of concern.

Pasture: Wildhorse (04)

Past Objectives: Improve early ecological condition to middle ecological condition within 15 years. Attain an upward trend in upland vegetative communities.

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (improve winter range) and upland (improve) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly due to historic grazing and increased fire frequency resulting in high concentrations of annual and weedy species. Upland trends indicate the pasture is progressing towards meeting objectives. Sagebrush growth has been limited by aroga moth kill in part of the pasture. Annual rangelands and wildlife (deer and pronghorn winter range) are issues of concern.

Pasture: South NG Seeding (05)

Past Objectives: Maintain late ecological condition for seeding areas. Minimize accumulation of wolf plants from ungrazed crested wheatgrass plants. Maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle ecological condition or DRFCs. Apply upland (improve), wildlife (improve) and seeding #1 objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly due to historic grazing resulting in stream flow pattern changes, soil crusting, changes in cover and surface litter, lack of species diversity and weed invasions. The long-term seeding trend is not meeting the past objective for ecological condition while the short-term trend shows some recent stability. It is unknown if the pasture is meeting the fall green-up objective. Wildlife

(deer, sage grouse and pronghorn winter range) is an issue of concern.

Pasture: Bully Creek Seeding (06)

Past Objectives: Improve early ecological condition of seeding areas to middle ecological condition within 15 years. Minimize wolf plants. Maximize availability of fall green up regrowth for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle ecological condition or DRFCs. Apply upland (improve), wildlife (improve) and seeding #2 objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly in the seeding due to historic grazing (rested 6 out of last 7 years), historic and current diatomite exploration/mining (in Ring Butte area only) and erodible soils. Bare ground is common with evidence of sheet erosion. Road use, aircraft landing strips and mineral development east of the current operation have exposed soils to wind erosion inhibiting seed germination. There is a high concentration of sagebrush and lack of species diversity with a cover increase of two feet on crested wheatgrass between 1981-1987. This pasture is not meeting ecological condition and the fall green-up objective. Open spaces between shrubs are vulnerable to weeds which are invading from adjacent agricultural fields. Wildlife (deer and pronghorn winter range) and weeds are issues of concern.

Pasture: North NG Seeding (07)

Past Objectives: Maintain late ecological condition for seeding areas. Minimize accumulation of wolf plants. Maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle ecological condition or DRFCs. Apply riparian (improve), upland (improve) and seeding #2 objectives. Sage grouse nesting habitat

Data Summary: The upland watershed function, ecological processes, wildlife habitats and riparian watershed function are not functioning

properly due to historic grazing in the seeded portion of the pasture. This has resulted in soil movement, stream channel instability and reduced grasses/forbs. The upland watershed function and wildlife habitats in the native portion of the pasture are functioning with adequate sagebrush cover. The long-term seeding trend is not meeting the objective for ecological condition, while the short-term trend shows some stability. It is unknown if the pasture is meeting the fall green-up objective. Wildlife (deer and pronghorn winter range) and special status species (sage grouse lek #349 nearby) are issues of concern.

Pasture: Mountain (08)

Past Objectives: Improve from middle ecological condition to late ecological condition within 15 years. Attain an upward trend in vegetative communities.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are functioning properly. Upland trends indicate the pasture is not meeting the upland objective (½ to 1 foot loss in bluebunch wheatgrass at one upland trend plot). The riparian watershed function is not functioning properly due to current and historic grazing (season of use), road through riparian area and impacts from big game (aspen and mountain shrub stands are declining). Cultural resources and special status species (reband trout at the top of Cottonwood Creek; contains sage grouse lek #350, and near leks #48, #349 and #351) are issues of concern.

Pasture: Holding (11)

Past Objectives: Improve early ecological condition to middle ecological condition within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (improve) and upland (improve) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly due to historic grazing. It is unknown if the pasture is meeting the upland objective. Annual rangelands, fisheries (fish and frogs) and deer winter range are issues of concern.

Pasture: Dry Creek (12)

Past Objectives: Improve early ecological condition to middle ecological condition within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (improve), upland (improve).

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly due to historic grazing in the native vegetation communities of the pasture (limited native grasses/forbs). It is unknown if the pasture is meeting the upland objective due to the lack of trend data. Wildlife (deer and pronghorn winter range), weed invasion and erosion are issues of concern.

Miscellaneous Pastures

***NOTE -** The Cottonwood Wildlife Stream Exclosure (10), the 0201 Riparian Stream Exclosure (20) and a portion of North NG seeding are being recommended to be managed as one pasture called Rocke Pasture.

Pasture: NG Creek Riparian Exclosure (09)

Past Objective: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: Refer to the comments for Mountain pasture (08). Riparian watershed function is not functioning properly due to historic and current grazing trespass, road through riparian area, and impacts from big game (aspen and mountain shrubs are declining). Wildlife

(deer, elk and pronghorn winter range), special status species (sage grouse lek #48 nearby) and recreation (high use area resulting in habitat degradation) are issues of concern.

Pasture: Cottonwood Wildlife Stream Exclosure (10)

Past Objective: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve) and riparian (improve) objectives.

Data Summary: It is unknown if upland watershed function and ecological processes are functioning properly. Riparian watershed function is not functioning properly due to historic and current grazing. The fences of the exclosure are not functioning resulting in grazing trespass from FFR on the west side of the pasture. No issues of concern have been identified in this pasture.

Pasture: Jordan FFR (13)

Past Objective: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Riparian watershed function (3/4 mile at FARU) is not functioning properly. Annual rangelands and deer winter range are issues of concern.

Pasture: FFR (14)

Past Objective: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Riparian watershed function is not functioning properly due to the control of natural water flows (upstream irrigation practices on private hay fields). BLM may not be able to improve the riparian areas due to the lack of control of private irrigation practices on adjoining lands which influence riparian growth in this pasture. Issues

of concern include annual rangelands.

Pasture: Bull Spring Riparian Exclosure (15)

No data.

Pasture: NG Wildlife Area (16)

Past Objective: None

New Objective: None

Data Summary: This pasture was never constructed and is being grazed as part of the South NG seeding (05).

Pasture: NG Holding (17)

Past Objectives:

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are functioning properly. Riparian watershed function is not functioning properly due to historic grazing. The fence between this pasture and the 0201 Riparian Stream Exclosure (20) is non-functional. The fence on the bottom of the Holding pasture (11) separating it from FFR is functional, but the fence separating it from the Cottonwood Wildlife Stream Exclosure (10) is not functional. Annual rangelands are an issues of concern.

Pasture: Cottonwood Fire Rehab (18)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives.

Data Summary: This pasture lies below Boston Horse Camp. Refer to the comments for Mountain Pasture (08). Riparian watershed function is not functioning due to the lack of woody species (aspen groves are decadent). Fences are marginally functional and not maintained. Special status species (redband trout) is an issue of concern.

Pasture: North Bully Holding (19)

Past Objectives: None

New Objectives: None

Data Summary: There are 91 acres identified for this pasture, but there are no functioning fences. This pasture is believed to be part of North Bully Creek pasture (03). Annual rangelands are an issues of concern.

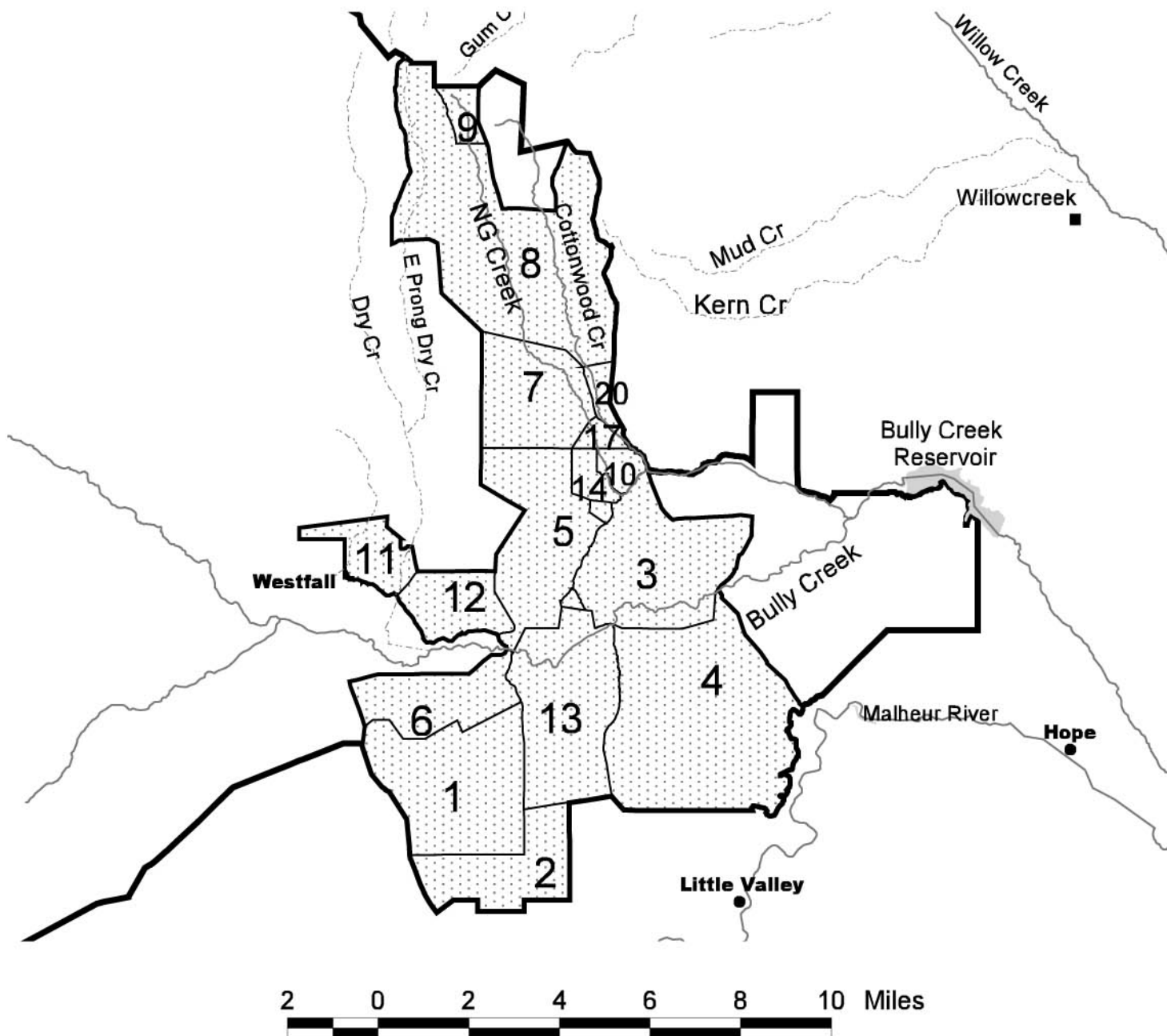
Pasture: 0201 Riparian Stream Exclosure (20)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: Fences are nonfunctional on the southern and western boundaries. Upland watershed function is properly functioning (see North NG Seeding (07) native vegetation communities). Riparian watershed function is not functioning properly due to historic grazing and current trespass as a result of nonfunctional fences. Current riparian trend is improving. The exclosure itself is not functional and is grazed. Special status species (sage grouse lek #349 nearby) is an issue of concern.

insert Map C-3: Bully Creek Landscape Area Allotment 2 10201



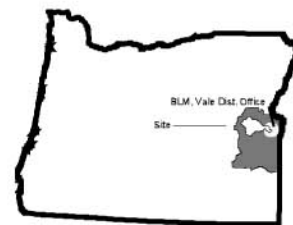
Map C-3. Bully Creek Landscape Area
Allotment 2 10201

Pasture Legend

- | | |
|-------------------------------|-----------------------|
| 1 Mesa Brush Control | 11 Holding |
| 2 Harper Seeding | 12 Dry Creek |
| 3 North Bully Creek | 13 Jordan FFR |
| 4 Wildhorse | 14 FFR |
| 5 South NG Seeding | 16 NG Wildlife Area |
| 6 Bully Creek Seeding | 17 NG Holding |
| 7 North NG Seeding | 20 0201 Riparian STEX |
| 8 Mountain | |
| 9 NG Creek Riparian Exclosure | |
| 10 Cottonwood Wildlife STEX | |

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Pastures
- Surface Water
- Allotment 2 10201
- Landscape Area



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Allotment #3 (10202)

Allotment Summary: Evaluations were conducted for this allotment in 1986 and 1993. Shortage of spring range and trends not meeting objectives were identified as concerns.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
600	300	50	0	30	50

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Indian Creek Ranch	10392	935	686	4/1-10/31
Romans Ranch	2605	0	0	4/1-10/31
Chris Davis	483	0	0	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		------(miles)-----										
Jones	PFC	5.5	3.75	2.25			FAR	N	FAR	S	S	ND
North Black Canyon	PFC	1.25				8	FAR	N	PFC	SD	S	SD
South Black Canyon	PFC/PFC	7.75				0.75	FAR/PFC	N	PFC/PFC	SD	S	ND
East Cottonwood Seeding	FAR				1		FAR	N	FAR	D	S	ND
West Cottonwood Seeding	FAR/FAR				1		PFC/PFC	N	PFC/PFC	S	SU	ND

Pasture	Standards for Rangeland Health									Trends		
Kelsay Butte	PFC						PFC		PFC	SU	SU	ND
Swamp Creek Seeding	PFC/PFC		2.75		2.25		PFC/PFC	N	PFC/PFC	D	SU	S
North Gregory Creek	PFC/PFC	3.25		1.75		1.5	FAR/PFC	N	PFC/PFC	ND	ND	ND
Indian Creek	PFC	0.75		0.75		1.5	PFC	N	PFC	ND	SU	ND
South Gregory Creek	PFC/PFC	1.75		4.5			PFC/PFC	N	PFC/PFC	SU	SU	ND
North Studhorse	PFC	1.75		0.75	1.5		PFC	N	PFC	S	SU	ND
South Studhorse	PFC		2				PFC	?	FAR	S	SU	ND
Lower Pole Creek FFR	FAR	2.75	1.5				NF	N	FAR	S	SU	U
Becker Horse Camp FFR	ND	To be assessed					ND		ND	ND	ND	ND
Wilson Creek FFR	ND	To be assessed					ND		ND	ND	ND	ND
Hanna Station FFR	ND						ND		ND	ND	ND	NR
Upper Pole Creek FFR	FAR					3	FAR	N	FAR	SD	S	ND
West Creek FFR	ND						ND		ND	ND	ND	NR
Dice FFR	ND					0.25	ND		ND	ND	ND	ND
Becker FFR	ND	To be assessed					ND		ND	ND	ND	ND
Westfall FFR	ND					1.75	ND	N	ND	ND	ND	ND
Pence Spring STEx	ND						ND		ND	ND	ND	ND
S. Fork Indian Creek STEx	ND	2.5					ND	Y	ND	ND	ND	ND
Allotment #3 RSEX	ND						ND		ND	ND	ND	ND
Zotto RSEX	ND						ND		ND	ND	ND	ND
Cooper Reservoir	ND						ND		ND	ND	ND	ND
Gregory Creek Reservoir	ND						ND		ND	ND	ND	ND
S. Gregory Creek Reservoir	ND						ND		ND	ND	ND	ND
Big Flat Reservoir	ND						ND		ND	ND	ND	ND
FFR	ND						ND		ND	ND	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Jones	3, 5	2, 3, 5	7/1-10/31	7/1-10/31	7/1-10/31	7/1-10/31	7/1-10/31	7/1-10/31
North Black Canyon	2, 3	2, 3	4/1-4/30	6/15-7/1	REST	REST	5/1-7/1	4/1-5/1
South Black Canyon	3	2,3	4/1-7/1	REST	5/1-7/1	5/1-7/1	REST	4/1-5/1
East Cottonwood Seeding	2	1,2,3,5	REST	4/1-4/30	4/1-4/30	4/1-4/30	4/1-4/30	5/1-7/1
West Cottonwood Seeding	2	1,2	7/15-10/31	5/1-6/15	4/1-4/30	4/1-4/30	4/1-4/30	5/1-7/1
Kelsay Butte			7/15-10/31	7/1-10/31	7/1-10/31	7/16-10/31	7/1-10/31	7/1-10/31
Swamp Creek Seeding	2	2	4/1-6/15	REST	3/15-5/15	4/15-5/15	4/1-5/1	5/1-7/1
North Gregory Creek		2,3	REST	3/15-6/15	REST	REST	5/1-7/1	4/1-4/30
Indian Creek		2	7/15-10/31	9/15-10/31	7/15-10/31	7/16-10/31	7/1-10/31	5/1-7/1
South Gregory Creek		2	4/1-6/15	REST	5/15-7/15	5/15-7/15	REST	7/1-7/31
North Studhorse		2	6/15-8/1	8/15-10/31	7/15-10/31	7/16-10/31	5/1-7/1	7/1-10/31
South Studhorse		5	8/1-10/31	7/1-8/15	5/15-7/16	5/15-7/16	7/1-10/31	7/1-10/31
Lower Pole Creek FFR	1, 2, 3, 5		3/1-4/30	3/15-4/30	4/15-5/15	3/15-4/15	4/15-5/1	5/1-6/1
Upper Pole Creek FFR	1, 2, 3, 5	1, 2, 3, 5	FFR	FFR	FFR	5/15-6/1	3/15-4/15	4/15-5/15
Middle Pole Creek FFR			FFR	FFR	FFR	4/15-5/15	5/15-6/15	3/15-4/15

Pasture Summaries:

Pasture: Jones (01)

Past Objectives: Maintain late ecological condition of upland vegetative communities.

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives. Sage

grouse nesting habitat.

Data Summary: The upland watershed function is in or making significant progress toward properly functioning condition. Upland trend indicates the pasture is meeting the upland objective. Ecological processes and wildlife habitats are not properly functioning due to historic and current grazing (after seed ripe). Riparian watershed function is not properly functioning for unknown reasons. The pasture has increasing levels of cheatgrass, juniper and other weedy species, and

the bitterbrush/chokecherry are not reproducing. Cultural resources, wildlife (summer range for deer and pronghorn), and special status species (reband trout, and sage grouse leks #69, #62, and #63 adjacent) are issues of concern.

Pasture: North Black Canyon (02)

Past Objectives: Improve 50% of riparian zone to late ecological condition in 15 years. All middle ecological condition classes were to improve.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and wildlife habitats are in or making significant progress toward proper functioning condition. The long-term upland trend indicates the pasture is not meeting its upland objective because the upland portions of this pasture have remained in middle ecological condition. Riparian watershed function and ecological processes are not properly functioning due to historic and current grazing and in-stream road maintenance by the County. The 2 acre Pence Spring Reservoir Enclosure (22) is located within this pasture. Cultural Resources (obsidian quarry) and special status species (reband trout in Cottonwood Creek, sage grouse leks #62 and #64 nearby) and wildlife (deer and antelope winter range) are issues of concern.

Pasture: South Black Canyon (03)

Past Objectives: Improve middle ecological condition to late ecological condition within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and wildlife habitats are in or making significant progress toward properly functioning

condition. The long-term upland trend indicates the pasture is not meeting the upland objective. Ecological processes and riparian watershed functions are properly functioning in a portion of the pasture, but not functioning in other portions due to historic grazing. Recruitment and seed production of native species is not adequate, and vegetation diversity is reduced with increasing weeds. The current grazing schedule (3 out of 5 years of rest with early season use the other 2 years) is not adequate for bluebunch wheatgrass to recover if grazing occurs during the growing season. Cultural Resources (obsidian quarry), wildlife (deer and pronghorn winter range) and special status species (spotted frog and sage grouse lek #60 nearby) are issues of concern.

Pasture: East Cottonwood Seeding (04)

Past Objectives: Maintain late ecosite condition for the seeding areas. Minimize accumulation of wolf plants; maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle ecological condition or DRFCs. Apply wildlife (improve), riparian (improve), upland (improve) and seeding #2 objectives.

Data Summary: The upland watershed function, ecological processes, and wildlife habitats are not in properly functioning condition due to historic grazing. Sagebrush and weeds are increasing in the seeding resulting in a lack of diversity. Upland trends indicate that the pasture is not meeting the seeding objective. Riparian watershed function is not functioning properly due to downcutting of the stream and historic and current grazing. Annual rangelands, weeds (whiteweed along roads) and wildlife (deer, sage grouse and pronghorn winter range) are issues of concern.

Pasture: West Cottonwood Seeding (05)

Past Objectives: Maintain late ecosite condition for the seeding areas. Minimize accumulation of wolf plants; maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite

condition of the native vegetation communities to attain middle ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve), upland (improve) and seeding #2 objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function is not properly functioning due to historic grazing. Upland trends indicate the pasture is meeting the seeding objective. Riparian watershed function is not functioning properly due to downcutting of the stream and historic and current grazing. Ecological processes and wildlife habitats are in properly functioning condition. Allotment #3 RSEX (24) comprising 11 acres is located within this pasture. Annual rangelands, special status species (redband trout in Cottonwood Creek, sage grouse lek #60 nearby) and wildlife (deer, sage grouse and pronghorn winter range) are issues of concern.

Pasture: Kelsay Butte (06)

Past Objectives: Improve middle ecological condition to late ecological condition class within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is moving towards meeting the upland objective. There are some even-aged aspen pockets within the pasture. Juniper is encroaching; control is warranted, but fire may adversely impact mountain mahogany. Juniper encroachment is an issue of concern

Pasture: Swamp Creek Seeding (07)

Past Objectives: Improve 50% of riparian zone to late ecological condition in 15 years.

New Objectives: The long-term objective is to improve ecosite condition in the native vegetation communities to attain middle ecological condition or DRFCs. Apply wildlife (maintain), riparian

(improve), upland (maintain) and seeding #3 objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Although the understory is lacking in forbs, shrub structure is good. Riparian watershed function is not properly functioning due to historic and current grazing; winter deer, sage grouse and pronghorn use is also heavy. Riparian trend indicates this pasture is not meeting the riparian objective. Annual rangelands (cheatgrass), Cultural Resources (obsidian quarry), special status species (redband trout in Cottonwood Creek) and weeds (Russian knapweed along the road; whitetop) are issues of concern.

Pasture: North Gregory Creek (08)

Past Objectives: Improve middle ecological condition to late ecological condition class within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and wildlife habitats are in or making significant progress toward properly functioning condition. The cause for ecological processes not properly functioning at one site is uncertain, but there is a lack of grass/forb species in places and the risk of annual weedy species and juniper encroachment is high. The riparian watershed function is not properly functioning possibly due to a geological influence and/or historic grazing, but causes are not fully understood. Annual rangelands, weeds, wildlife (deer and pronghorn winter range), special status species (sage grouse lek #61 nearby), juniper encroachment and Cultural Resources (quarry for naturally occurring obsidian) are issues of concern.

Pasture: Indian Creek (09)

Past Objectives: Maintain late ecosite condition.

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife

(maintain), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Short-term upland trend indicates the pasture is meeting the upland objective (plot was established in 1992). Spraying of weeds has included the spot treatment of Russian knapweed along roads in the northwest corner of the pasture. Whitetop and Scotch thistle have also been spot treated along the Pole Creek Road from Hwy. 20 to Becker Horse Camp and on private lands at Big Springs. Riparian watershed function is not functioning properly due to a geological influence on the stream channel, sediment loading from upstream sources, juniper encroachment and historic grazing. The South Fork Indian Creek Stream Enclosure (23) (no data on size) and the Zotto Reservoir Enclosure (25) (38 acres) are located within this pasture. Annual rangelands, juniper encroachment, special status species (spotted frog and redband trout), wildlife (deer and sage grouse winter range) and weeds are issues of concern.

Pasture: South Gregory Creek (10)

Past Objectives: Improve middle ecological condition to late ecological condition class within 15 years.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. The pasture was rested four out of the last five years. Upland trends indicate the pasture is moving towards meeting the upland objective. Riparian watershed function is not properly functioning due to restricted stream flows controlled by a reservoir located upstream. Cultural Resources (obsidian quarry), juniper encroachment (widely scattered, but encroaching), and special status species (redband trout in West Fork Cottonwood Creek and sage grouse leks #61 and #62 nearby) are issues of concern.

Pasture: North Studhorse (11)

Past Objectives: Maintain late ecosite condition.

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Bitterbrush is reproducing well, and there are some old growth juniper present. Upland trends indicate the pasture is meeting the upland objective. Riparian watershed function is not properly functioning due to current grazing (late/hot season use has not been conducive to recovery), juniper encroachment and restricted stream flows controlled by upstream reservoir. Wildlife (deer and elk summer habitat), juniper encroachment, weeds (Russian knapweed and whitetop have been treated twice along a 1/8-mile roadway site north of Muir Reservoir) and special status species (redband trout and sage grouse leks #61, #62 and #63 nearby) are issues of concern.

Pasture: South Studhorse (12)

Past Objectives: Maintain late ecosite condition.

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is meeting the upland objective. Wildlife and riparian watershed function are not properly functioning due to current grazing (hot season of use), reservoir control on water flows and juniper encroachment. Wildlife (deer and elk habitat), juniper encroachment and special status species (goshawk nesting and hunting within 1 mile) are issues of concern.

Pasture: Lower Pole Creek (13)

Past Objectives: Improve vegetation associated with riparian zone.

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed function, riparian watershed function, ecological processes and wildlife habitats are not properly functioning due to historic grazing and upstream impacts (access and historic and current grazing). This has resulted in a lack of perennial grasses along with juniper and annual weed encroachment. Riparian trend indicates the pasture is meeting the riparian objective. Pole Creek is a 303(d) listed stream and, as such, is not properly functioning in terms of water quality (temperature). Annual rangelands (medusahead rye), wildlife (deer and elk year-round habitat), special status species (redband trout and spotted frog) and juniper encroachment are issues of concern.

Pasture: Upper Pole Creek FFR (17)(b pasture is public land)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed functions, riparian watershed function, ecological processes and wildlife habitats are not properly functioning due to access and historic and current grazing. This has resulted in a lack of perennial grasses along with juniper and annual weed encroachment. Road location is impacting riparian watershed functions. Pole Creek is a 303(d) listed stream and, as such, is not properly functioning in terms of water quality (temperature). See the comments for Indian Creek pasture for weed treatments. Annual rangelands, wildlife (elk and deer habitat), juniper encroachment, weeds and special status species (redband trout and spotted frog) are issues of concern.

Miscellaneous Pastures

Pasture: Becker Horse Camp FFR (14)

Bully Creek LAMP Appendix C

Past objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: Riparian assessment needs to be completed. Juniper encroachment and special status species (sage grouse leks #61, #62, and #63 nearby) are issues of concern.

Pasture: Wilson Creek FFR (15)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply riparian (maintain) and upland (improve) objectives.

Data Summary: Riparian assessment needs to be completed. Annual rangelands and juniper encroachment are issues of concern.

Pasture: Hanna Station FFR (16)

Past Objectives: None

New Objectives: None

Data Summary: Riparian area (NF Indian Creek and Hanna Reservoir) is on private land. Annual rangelands and juniper encroachment are issues of concern.

Pasture: West Creek FFR (18)

Past Objectives: None

New Objectives: None

Data Summary: Riparian habitat is on private lands. Annual rangelands are an issue of concern.

Pasture: Dice FFR (19)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Riparian watershed function is not properly

functioning. Annual rangelands are an issue of concern.

Pasture: Becker (20)

Past Objectives: None

New Objectives: None

Data Summary: Riparian assessment needs to be completed. Juniper encroachment is an issue of concern.

Pasture: Westfall FFR (21)

Past Objectives:

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Riparian watershed function is not functioning properly due to historic grazing. Annual rangelands and weeds are issues of concern.

Pasture: Pence Spring Stream Exclosure (22)

Past Objectives: None

New Objectives: None

Data Summary: Fences in North Black Canyon are not functioning (targeted for repair by Bully Creek Watershed Coalition). No issues of concern have been identified.

Pasture: SF Indian Creek Stream Exclosure (23)

Past Objectives: None

New Objectives: Apply riparian (maintain) objective.

Data Summary: Exclosure is located from Zotto Reservoir to Big Springs. Riparian watershed function is properly functioning. There are historic trespass problems on the western end of this exclosure. Potential Wild and Scenic River designation (currently 2 miles/626 acres determined eligible but not suitable for potential designation (SEORMP)). No issues of concern have been identified.

Pasture: Allotment #3 Reservoir Exclosure (24)

Bully Creek LAMP Appendix C

Past Objectives: None

New Objectives: None

Data Summary: This stocked fisheries reservoir exists within West Cottonwood Seeding (05), but the fences are not functioning. The Bully Creek Watershed Coalition has targeted these fences for repair as well proposing to pipe water out of the reservoir for livestock watering. Annual rangelands are an issue of concern.

Pasture: Zotto Reservoir Exclosure (25)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Annual rangelands and weeds are issues of concern.

Pasture: Cooper Reservoir (26)

Past Objectives: None

New Objectives: None

Data Summary: Condition unknown other than this is a box

reservoir for a livestock watering project. Annual rangelands and juniper encroachment are issues of concern.

Pasture: Gregory Creek Reservoir (27)

Past Objectives: None

New Objectives: None

Data Summary: Condition unknown. Annual rangelands are an issue of concern.

Pasture: S. Gregory Creek Reservoir (28)

Past Objectives: None

New Objectives: None

Data Summary: Condition unknown. Annual rangelands are an issue of concern.

Pasture: Big Flat Reservoir (29)

Past Objectives: None

New Objectives: None

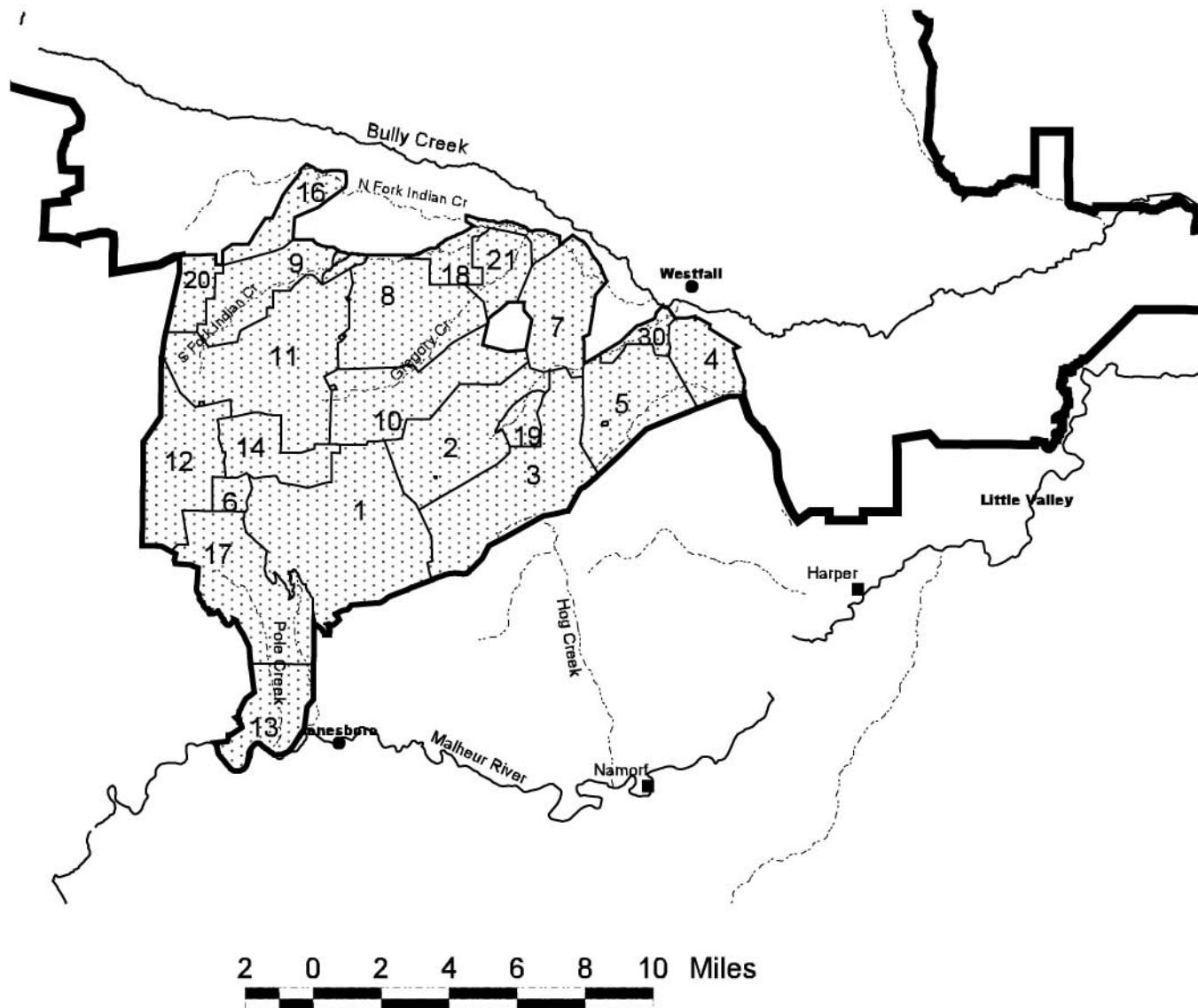
Data Summary: Condition unknown. No issues of concern have been identified in this pasture.

Past Objectives: None

New Objectives: None

Data Summary: Annual rangelands are an issue of concern.

Pasture: FFR (30)



Map C-4. Bully Creek Landscape Area
Allotment 3 10202

Map Legend

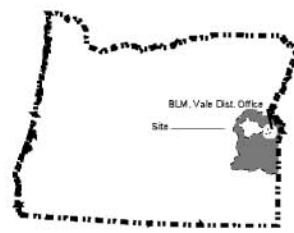
- Places
- Cities
- Intermittent Streams
- Perennial Streams
- ▨ Pastures
- Allotments
- ▭ Landscape Area

Pasture Legend

- | | |
|---------------------------|--------------------------|
| 1 Jones | 11 North Studhorse |
| 2 North Black Canyon | 12 South Studhorse |
| 3 South Black Canyon | 13 Lower Pole Creek FFR |
| 4 East Cottonwood Seeding | 14 Becker Horse Camp FFR |
| 5 West Cottonwood Seeding | 16 Hanna Station FFR |
| 6 Kelsay Butte | 17 Upper Pole Creek FFR |
| 7 Swamp Creek Seeding | 18 West Creek FFR |
| 8 North Gregory Creek | 19 Dice FFR |
| 9 Indian Creek | 20 Becker FFR |
| 10 South Gregory Creek | 21 Westfall FFR |
| | 30 FFR |



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Allotment Summary: Evaluations for this allotment were conducted in 1989 and 1996. Issues concerning upland trends and riparian conditions were raised in both evaluations. Some pastures containing private land are managed as custodial pastures with no management objectives identified.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
250	25	5	0	30	0

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Terry Amick	3023	0	84	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		----- (miles) -----										
West Rock Creek	PFC						PFC		PFC	S	S	NR
East Chastain	PFC			1.25			PFC	N	FAR	ND	ND	ND
West Chastain	PFC			1.25			FAR	N	ND	D	S	ND
Kitten Canyon	PFC			2.75	9.25	2.5	PFC	N	PFC	S	S	D
East Crow Creek	PFC/PFC/PFC	6.25	3.5	2	1		PFC/FAR/PFC	N	FAR/FAR/FAR	ND	ND	D
West Crow Creek	PFC/PFC		3.25	5			PFC/FAR	N	FAR/FAR	S	SU	D
Home FFR	ND	To be assessed					ND		ND	ND	ND	ND
Lost Creek FFR	ND					0.5	ND		ND	ND	ND	NR

Pasture	Standards for Rangeland Health									Trends		
East Rock Creek	ND						ND		ND	ND	ND	NR
FFR	ND						ND		ND	ND	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule			
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1 1999	Year 2 2000	Year 3 2001	Year4 2002
West Rock Creek			4/1-4/30	4/1-4/30	REST	4/1-4/30	4/1-4/30	4/1-4/30	5/1-5/31
East Chastain		2, 5	4/1-4/30	5/16-6/30	4/1-4/30	5/16-6/30	REST	5/16-6/30	4/1-4/30
West Chastain		2, 3	5/16-7/1	7/1-7/31	6/1-6/15	7/1-7/30	5/16-7/1	7/1-8/1	10/1-10/31
Kitten Canyon	2	2	7/2-8/15	8/1-9/30	6/16-9/1	8/1-8/30 10/1-10/30	7/1-7/8	10/1-10/31	6/1-7/15
East Crow Creek		2, 3, 5	REST	REST	10/1-10/31	REST	9/16-10/31	9/2-10/1	7/16-9/1
West Crow Creek		2, 3, 5	8/16-10/31	10/1-10/31	9/2-9/30	9/1-10/1	REST	8/2-9/1	9/2-10/1
Lost Creek FFR			N/D	N/D	N/D				
East Rock Creek			5/1-5/15	5/1-5/15	5/1-5/31	5/1-5/15	5/1-5/15	5/1-5/15	REST

Pasture Summaries:

Pasture: West Rock Creek (01)

Past Objectives: Improve middle ecological condition to late ecological condition (1990 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (maintain) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is not

meeting the upland objective. Annual rangelands and weeds (Russian knapweed coming from East Chastain (02) and West Chastain (03) pastures to the north and whitetop) and near sage grouse lek #51 are issues of concern.

Pasture: East Chastain (02)

Past Objectives: Improve middle ecological condition to late ecological condition for upland vegetative communities (1990 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife

(improve), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Riparian watershed function is not properly functioning (cause unknown; grazing has been early season the last 5 years; willow being grazed by cattle or wildlife; healthy aspen stand below). Wildlife habitats are not properly functioning (cause unknown). Juniper encroachment should be monitored. Annual rangelands, special status species (sage grouse lek #51 nearby), and weeds (Russian knapweed) are issues of concern.

Pasture: West Chastain (03)

Past Objectives: Improve middle ecological condition to late ecological condition for upland vegetative communities (1990 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed is in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is not meeting the upland objective. Riparian watershed function and ecological process are not properly functioning due to historic grazing resulting in low productivity and lack of community diversity. Juniper encroachment should be monitored. Annual rangelands, special status species (sage grouse leks #51 and #52) and special management areas (1,709 acres of the Beaver Dam Creek WSA) are issues of concern.

Pasture: Kitten Canyon (04)

Past Objectives: Improve middle ecological condition to late ecological condition for upland vegetative communities (1990 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite

condition to attain late ecological condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes, and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is not meeting the upland objective. Riparian watershed function is not properly functioning due to historic and current grazing (season of use) and juniper encroachment. Wildlife (deer and elk habitat and songbirds), juniper encroachment, special status species (sage grouse leks #38, #39 and #40 nearby) and special management areas (4,872 acres of the Beaver Dam Creek WSA) are issues of concern.

Pasture: East Crow Creek (05)

Past Objectives: Improve designated riparian zones to achieve climax conditions on at least 50% of these riparian zones. Maintain late ecological condition of upland vegetative communities. (1990 AMP)

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function and one site monitored for ecological processes are in or making significant progress toward properly functioning condition. Riparian watershed function, one site monitored for ecological processes, and wildlife habitats are not properly functioning due to historic grazing, elk populations, juniper encroachment and fire suppression. Streams have historically blown out, but are recovering (South Clover Creek/Rail Canyon and part of Clover Creek). Trend data indicates the riparian objective is not being met. Wildlife (elk and deer habitat; songbirds), juniper encroachment and special status species (nesting goshawk, spotted frog and redband trout) are issues of concern.

Pasture: West Crow Creek (06)

Past Objectives: Improve designated riparian zones to achieve climax conditions on at least 50% of these riparian zones. Maintain late

ecological condition of upland vegetative communities (1990 AMP)

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function and one site monitored for ecological processes are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is meeting the upland objective. Riparian watershed function, one site monitored for ecological processes, and wildlife habitats are not properly functioning due to historic grazing, high elk populations, juniper encroachment and fire suppression. This has resulted in decadent aspen stands, lack of woody reproduction, and overstocking of coniferous trees. Trend data indicates the riparian objective is not being met. Wildlife (elk and deer, and songbirds), juniper encroachment and special status species (goshawk) are issues of concern.

Pasture: Home FFR (07)

Past Objectives: Early seral. Improve ecological condition of riparian vegetative communities.

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply riparian (maintain) and upland (improve) objectives.

Data Summary: Riparian watershed function is located on public lands in the northwest portion of pasture (Bully Creek segment). It is unknown if the pasture is meeting the riparian objective. Issues of concern include wildlife, juniper encroachment and special status species.

Pasture: Lost Creek FFR (08)

Past Objectives: Late seral. Maintain ecological condition of upland vegetative communities

New Objectives: The long-term objective is to maintain ecosite condition at late ecological condition or DRFCs. Apply riparian (improve) and upland (maintain) objectives.

Data Summary: Riparian watershed function is not properly functioning due to historic and current grazing and lack of aspen recruitment (heavy elk use). The Beaver Dam Creek WSA (394 acres) lies primarily on upland habitat with little concern. There are no issues of concern.

Pasture: East Rock Creek (09)

Past Objectives: None (custodial).

New Objectives: The long-term objective is to improve ecosite condition to attain late ecological condition or DRFCs. Apply upland (improve) objective.

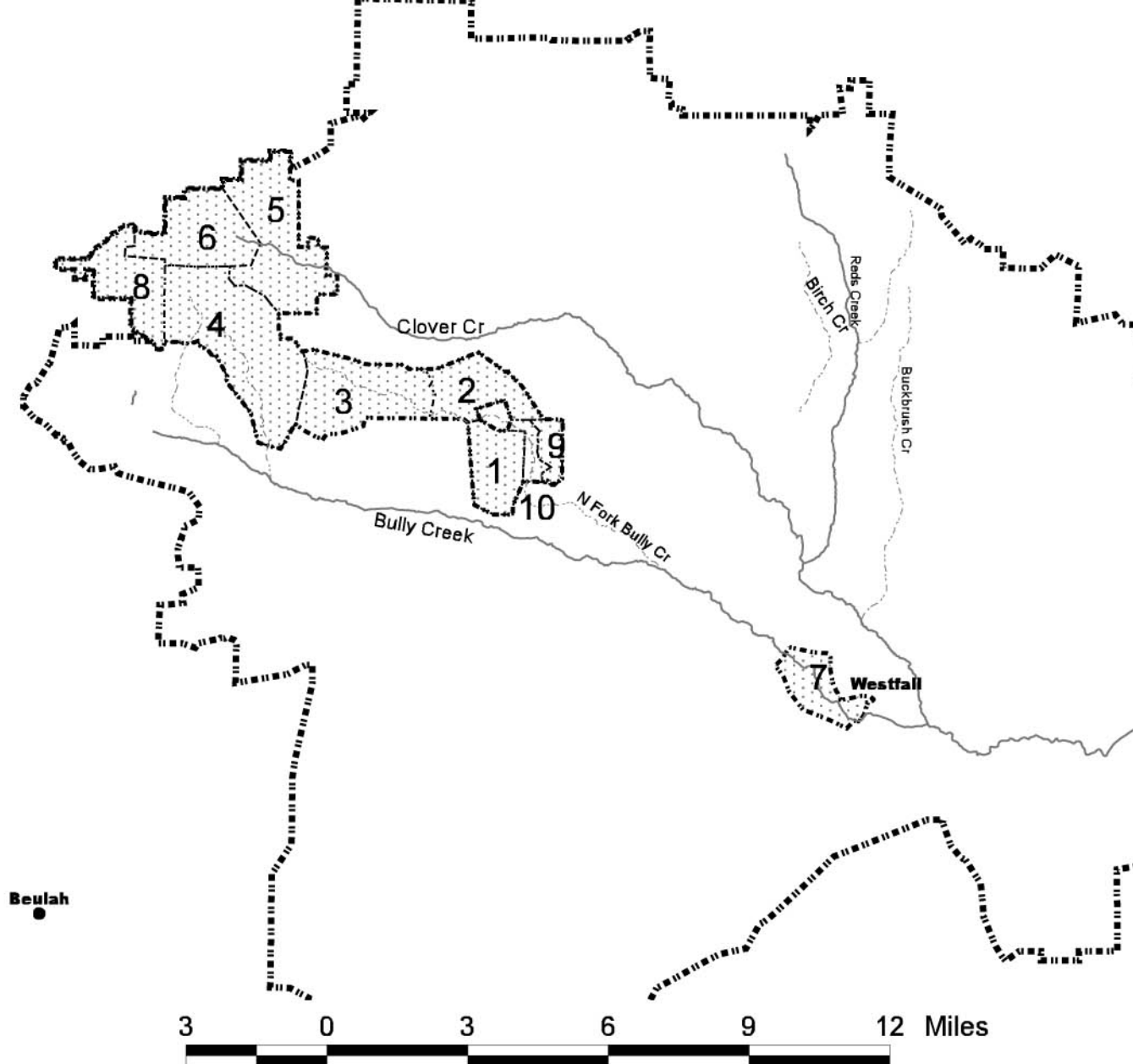
Data Summary: SRH were not assessed. Annual rangelands are an issue of concern.

Pasture: FFR (10)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain middle ecological condition or DRFCs. Apply upland (improve) objective.

Data Summary: Riparian area is on private lands. Annual rangelands are an issue of concern.

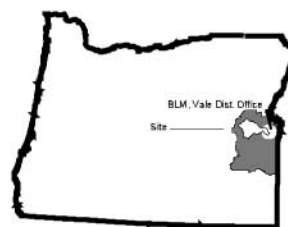


Map C-5. Bully Creek Landscape Area
Rail Canyon Allotment 10205

- Pasture Legend**
- Rail Canyon
 - 1 West Rock Creek
 - 2 East Chastain
 - 3 West Chastain
 - 4 Kitten Canyon
 - 5 East Crow Creek
 - 6 West Crow Creek
 - 7 Home FFR
 - 8 Lost Creek FFR
 - 9 East Rock Creek
 - 10 FFR

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Rail Canyon Pastures
- ▨ Rail Canyon 10205
- ▭ Landscape Area



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Richie Flat Allotment (10214)

Allotment Summary: In 1988 an allotment evaluation was completed for this allotment. No adjustments were made in livestock management as a result of this evaluation due to the non-use taken by the livestock operator in the years prior to the evaluation and lack of critical resource issues.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
40	120	20	25	5	10

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
JD Dearing	3168	381	0	4/1-11/15

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		----- (miles) -----										
South Ridge	PFC/PFC						PFC/PFC		FAR/PFC	U	U	NR
North Ridge	PFC						PFC		PFC	SU	S	NR
Richie Flat Seeding	PFC						FAR		FAR	U	U	NR
West Log Creek	PFC			2	4		PFC	N	PFC	U	U	ND
East Log Creek	PFC	0.75	2.5		2.75		PFC	N	PFC/FAR	SU	SU	S
Poison Butte	PFC						PFC		PFC	ND	ND	NR
Richie Flat FFR	ND						ND		ND	ND	ND	NR
Reds Creek 3-Way EX	ND						ND		ND	ND	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
South Ridge		5	9/15-11/15	9/15-11/15	6/1-7/15	7/1-10/31	7/1-10/31	5/1-7/1
North Ridge			11/15-12/30	9/15-11/15	9/1-11/15	7/1-10/31	6/1-8/1	7/1-10/31
Richie Flat Seeding		3,5	5/1-6/30	5/1-6/30	5/1-6/1	5/1-7/1	7/1-10/31	5/1-7/1
West Log Creek		2	4/1-4/30	4/1-4/30	5/1-5/31	4/1-5/1	5/1-6/1	4/1-5/1
East Log Creek		2,5	4/1-4/30	4/1-4/30	4/1-4/30	5/1-6/1 9/1-10/31	4/1-5/1 9/1-10/31	4/1-5/1 9/1-10/31
Poison Butte			5/1-6/30	5/1-6/30	REST	5/1-7/1	7/1-10/30	7/1-10/30

Pasture Summaries:

Pasture: South Ridge (01)

Past Objectives: Attain upward trend in 5-10 years and improve early ecological condition to middle ecological condition class within 15 years (by 2003).

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain late condition or DRFCs. Apply wildlife (maintain), seeding #3 and upland (maintain) objectives. Most of this pasture is native vegetation communities, however, crested wheatgrass was seeded in the southern portion of the pasture. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats in the native portion of the pasture are in or making significant progress toward properly functioning condition. Wildlife habitat in the seeding is not properly functioning due to the lack of vegetative diversity. It is unknown if the pasture is meeting the upland objective for native vegetation communities. This pasture has been

proposed as an ACEC/RNA for native vegetative communities. Annual rangelands and special status species (sage grouse leks #56 and #57 in pasture and lek #58 nearby) are issues of concern.

Pasture: North Ridge (02)

Past Objectives: Improve middle ecological condition to late ecological condition within 10 years by 1998.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in properly functioning condition. Upland trends indicate the pasture is moving toward meeting the upland objective. Juniper encroachment is a low priority problem because ecological conditions are very good; however, one patch is established and deserves monitoring. This pasture has been proposed as an ACEC/RNA for native vegetative communities and sage grouse values. Annual rangelands and special status species (sage grouse leks #54 and

#55) are issues of concern.

Pasture: Richie Flat Seeding (03)

Past Objectives: Improve good seeding condition to excellent seeding condition within 15 years (by 2003); restrict grazing of fall green-up and regrowth for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain late condition or DRFCs. Apply wildlife (improve), upland (maintain) and seeding #3 objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function is in properly functioning condition. This seeding appears to be recovering. Ecological processes and wildlife habitats are not properly functioning due to historic grazing, invasion by annual weeds and a lack of vegetative community diversity. A small corner of native vegetation communities is in fine condition. Seeding trends indicate the pasture is moving toward meeting the seeding objective. Special status species (sage grouse lek #225 and #58 nearby) is an issue of concern.

Pasture: West Log Creek (04)

Past Objectives: Improve early ecological condition to middle ecological condition of upland vegetative communities within 10 years by 1998.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is moving toward meeting the upland objective. Riparian watershed function is not properly functioning due to historic grazing and current conditions of upstream private lands. Log Creek and Birch Creek aspen stands and the large woody vegetation have lost vigor (largely an upstream problem on private lands). Annual rangelands and special

status species (sage grouse leks #56, #57, #58 and #59 nearby) are issues of concern.

Pasture: East Log Creek (05)

Past Objectives: Attain upward trend in 5-10 years (by 1998) and improve from early ecological condition to middle ecological condition within 15 years (by 2003). Increase density and cover of perennial vegetation associated with riparian zone on Reds Creek.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is moving toward meeting the upland objective. Riparian watershed function is not properly functioning due to historic grazing and wildlife browsing on willows. Wildlife habitats are not properly functioning due to historic grazing in stiff sagebrush habitat (big sagebrush habitat is functional). Riparian trend indicates the pasture is moving toward meeting the riparian objective. The Reds Creek 3-Way Upland Exclosure (no data on size) is located within this pasture. Annual rangelands and special status species (contains sage grouse lek #59; and leks #58, #225 and #351 nearby) are issues of concern.

Pasture: Poison Butte (06)

Past Objectives: Improve early ecological condition to middle ecological condition within 15 years (by 2003). Maintain/improve the quality of deer/antelope winter range.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain) and upland (improve) objectives. Sage grouse nesting habitat.

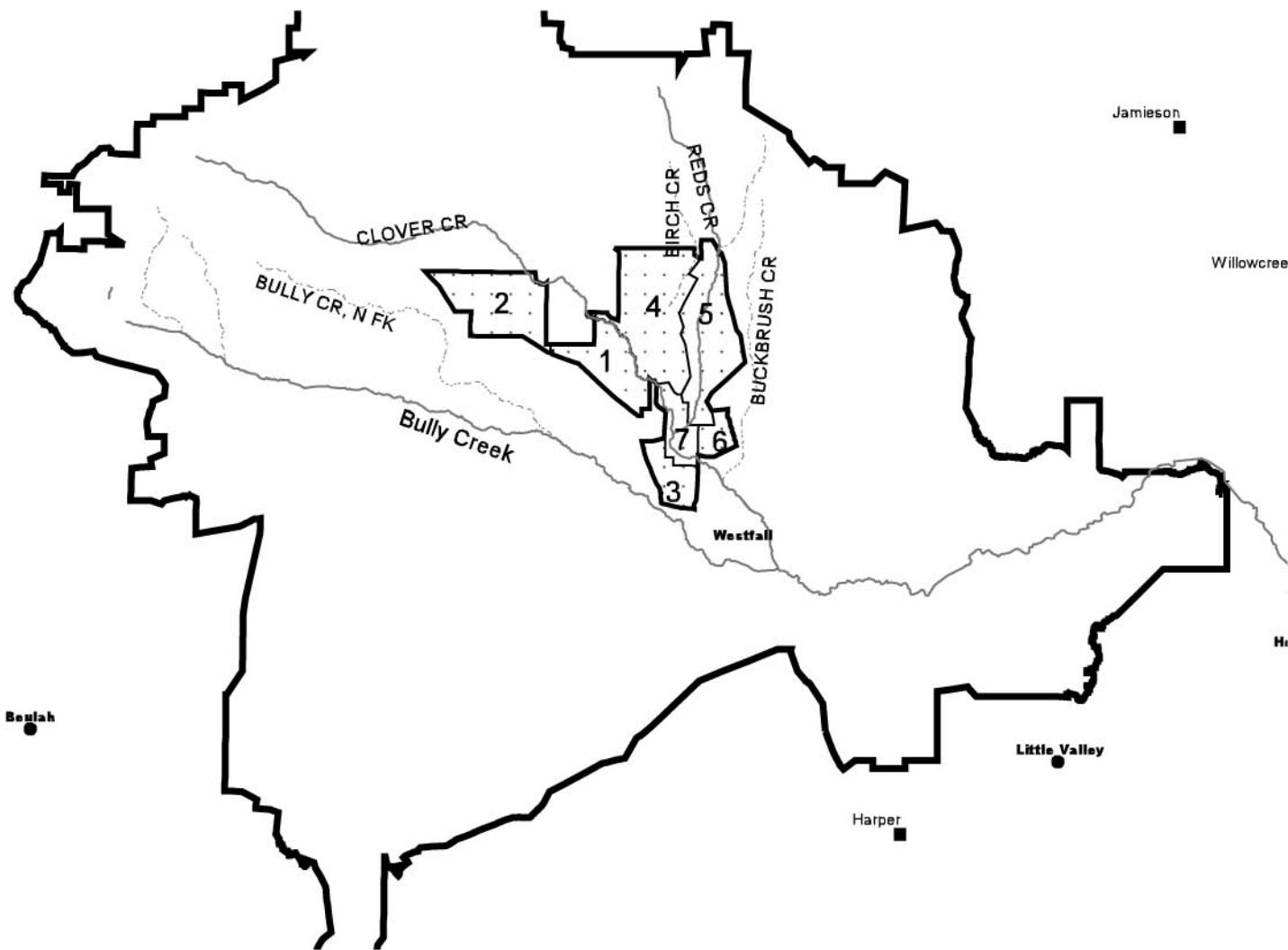
Data Summary: The upland watershed function, ecological processes, and wildlife habitats are in or making significant progress toward properly functioning condition. Annual rangelands and special status species (sage grouse leks #58 and #225 nearby) are issues of concern.

Pasture: Richie Flat FFR (07)

Past Objectives: None

New Objectives: No objectives are to be defined due to small acreage of public domain.

Data Summary: Only 9 acres of public lands are within the pasture and no data has been collected. There are no issues of concern.



2 0 2 4 6 8 10 12 Miles



Map C-6. Bully Creek Landscape Area
Richie Flat Allotment 10214

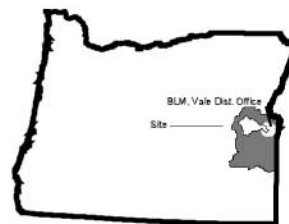
Pasture Legend
 Richie Flat
 1 South Ridge
 2 North Ridge
 3 Richie Flat Seeding
 4 West Log Creek
 5 East Log Creek
 6 Poison Butte
 7 Richie Flat FFR

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Richie Flat Pastures
- Richie Flat 10214
- Landscape Area



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Brian Creek Allotment (10215)

Allotment Summary: At one time this allotment was part of Buckbrush Allotment (10218).

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
5	15	15	10	5	10

Source: SEORMP Appendix E

Past Objectives: Maintain/improve the ecological condition of upland vegetative communities.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Roger Corrigan	1092	0	0	4/1-11/15

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		----- (miles)-----										
Mountain	PFC		3.25	3	1.5		PFC	N	PFC	S	SU	S
North NG Seeding	FAR		1				PFC	N	FAR	D	S	ND
South NG Seeding	FAR/FAR		0.15				FAR/FAR	N	FAR/FAR	ND	ND	ND

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
North Mountain	2	2	8/1-10/31	6/15-10/31	8/1-9/15	4/1-5/15	4/1-5/15	10/1-10/30
South Mountain	2	2	8/1-10/31	1 6/15-10/3	8/1-9/15	5/6-7/1	7/15-9/1	9/1-9/30
North NG Seeding	1, 2, 5		4/1-6/1	10/15-10/31	4/1-6/1	9/1-10/30	9/1-10/30	4/1-7/1
South NG Seeding	1, 2, 3, 5		10/1-10/31	4/1-6/15	9/15-10/31	9/1-10/30	9/1-10/30	4/1-7/1
True (Private)			6/1-7/31	9/15-10/15	8/1-9/15	7/1-8/1	6/15-7/15	8/1-9/1
Swede (Private)			6/1-7/31	9/15-10/15	6/1-7/31	8/1-9/1	5/16-6/16	7/1-8/1

Pasture Summaries:

Pasture: Mountain Pasture (01)

Past Objectives: Maintain late ecosite condition class.

New Objectives: The long-term objective is to maintain ecosite condition at late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland objectives are being met on the short-term. Riparian watershed function is not properly functioning due to historic and current grazing (season-of-use) and big game impacts. Riparian trend on Brian Creek is static in a degraded condition. Deer populations are down. Aspen stands are dead or dying along with other riparian shrubs/trees. Wildlife habitats were rated as properly functioning; however, riparian obligate species (trout; sage grouse; song birds; amphibians) are impacted by current riparian conditions. Riparian trend is static in a degraded condition on Brian Creek. Wildlife (big game use in spring and summer and some overwintering) and special status species (sage grouse leks #351 and #59 nearby) are issues

Bully Creek LAMP Appendix C

of concern.

Pastures: North NG Seeding (02)

Past Objectives: Attain upward trend; improve middle ecological seeding condition to late ecological condition within 15 years (by 2002). Minimize wolf plants. Maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle condition or DRFCs. Apply wildlife (improve), riparian (improve), upland (improve) and seeding #1 objectives.

Data Summary: The upland watershed function, riparian watershed function, ecological processes and wildlife habitats are not in properly functioning condition due to historic and current grazing. The seeding has been used intensely, and the crested wheatgrass has lost viability, resulting in an increase in the shrub component Upland trend indicates the pasture is not meeting the seeding objective. Annual rangelands are (more than 25% of pastures in annual species) are an issue of concern.

Pastures: South NG Seeding (03)

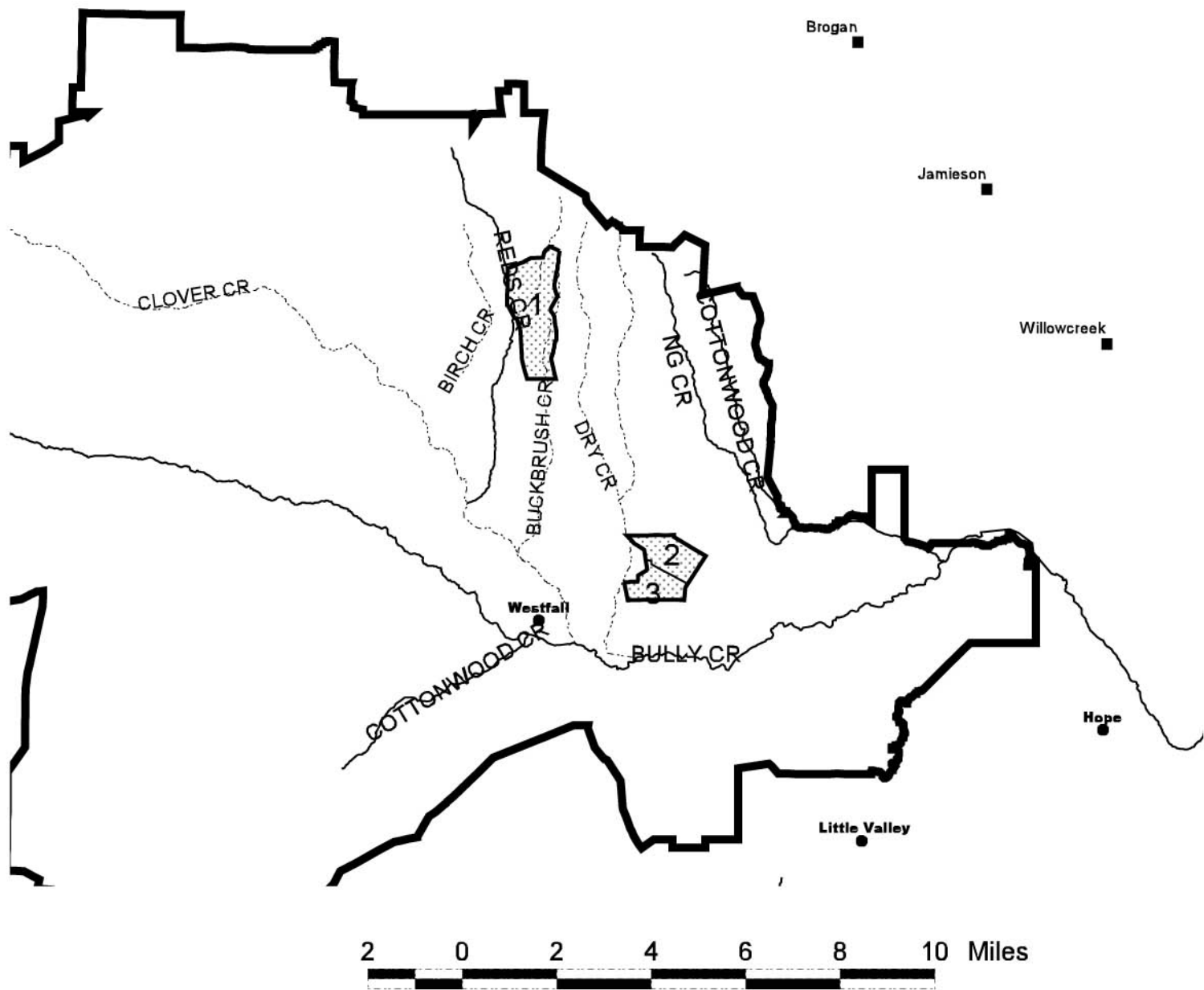
Past Objectives: Attain upward trend; improve middle ecological

seeding condition to late ecological condition within 15 years (by 2002). Minimize wolf plants. Maximize availability of fall green-up for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle condition or DRFCs. Apply wildlife (improve), riparian (improve), upland (improve) and seeding #1 objectives.

Data Summary: The upland watershed function, riparian watershed function, ecological processes and wildlife habitats are not in properly

functioning condition due to historic and current grazing. The seeding has been used intensely, and the crested wheatgrass has lost viability, resulting in an increase in the shrub component. The riparian area is minimal (water gap). There are no specific trend data for this pasture therefore trend is represented in North NG Seeding (02). Annual rangelands are (more than 25% of pastures in annual species) are an issue of concern.



Map C-7. Bully Creek Landscape Area
Brian Creek Allotment 10215

Map Legend

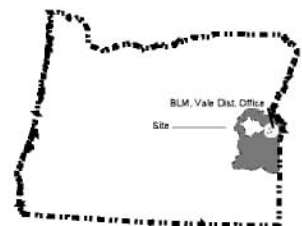
- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Brian Creek Pastures
- ▨ Brian Creek 10215
- ▭ Landscape Area

Pasture Legend

- Brian Creek
- 1 Mountain
- 2 North NG Seeding
- 3 South NG Seeding



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Buckbrush (10218)/Westfall Seeding (00227)

Allotment Summary: Westfall Seeding (Allotment 00227) is a single pasture which is used in conjunction with Buckbrush Allotment. Evaluations were completed for these allotments in 1990 and 1995. There were no major resource issues identified although both seedings showed a long-term downward trend. Specific note was made that grazing schedules have been followed and project maintenance has been good.

Forage demand for ODFW big game management objectives (number of animals):

Buckbrush/Westfall Seeding					
<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
150\75	75\25	10\5	15\5	5\10	15\20

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

Buckbrush Allotment 10218

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Thomas Silvey	608	92	0	4/1-10/31
Arriola Brothers	2189	370	0	4/1-10/31

Westfall Allotment 00227

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Arriola Brothers	327	0	0	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FAR U	FARN	FARD	NF						
		----- (miles) -----										
Buckbrush Seeding	PFC/PFC		1			0.75	FAR/PFC	N	FAR/PFC	D	SU	U
Buckbrush	PFC/PFC		3.75	3.25			PFC/PFC	N	PFC	SU	U	S
Turnout	PFC/FAR		2.5	3.5			FAR/FAR	N	PFC	S	S	ND
Mountain	PFC		3.75	1.5	1.75		PFC	N	ND	SU	S	ND
FFR	FAR						NF		FAR	S	S	NR
Gathering	PFC						PFC		PFC	SU	SU	NR
Salters/ State	PFC/PFC			2.25			FAR/PFC	N	FAR/PFC	SU	SU	ND
Westfall Seeding (00227)	FAR						FAR		FAR	D	S	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Buckbrush Seeding	2	2,3,5	4/1-4/30	4/1-6/30	10/1-10/31	As needed	9/1-10/1	10/1-10/31 4/1-5/1
Buckbrush Lower Upper		2	8/16-10/31	10/1-10/31	4/1-6/30	5/1-6/1 6/1-7/15	8/1-9/1 7/1-8/1	4/1-5/1 10/1-10/31 7/1-8/1
Turnout		1,2,3	4/1-5/15	4/1-6/30	10/1-10/31	4/1-5/1	4/1-5/1	6/1-7/1
Mountain Lower Upper	2	2	5/15-8/15	7/1-9/30	7/1-9/30	7/15-8/15 8/15-9/15	5/1-6/1 6/1-7/1	8/1-9/1 9/1-10/1
Gathering			GATHERING			GATHERING		
Salters/State		2,3,5	8/16-10/31	10/1-10/31	4/1-6/30	9/16-10/31	10/1-10/31	5/1-6/1
Westfall Seeding (00227)			8/16-10/31	10/1-10/31	4/1-6/30	As needed	As needed	As needed

Pasture Summaries:

Pasture: Buckbrush Seeding (01)

Past Objectives: Improve the quality of deer/antelope winter range.

Improve the middle ecological condition of the upland vegetative community.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle condition or DRFCs. Apply wildlife (improve/maintain), riparian (improve) and seeding #2 objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and wildlife habitats on the native vegetation communities are in or making significant progress toward properly functioning condition. The upland objective is not being met. Riparian watershed function is not properly functioning due to historic and current grazing and geological influences. Ecological processes and wildlife habitats in the seeding are not properly functioning due to historic grazing which has reduced the grass/forb component. Annual rangelands and special status species (sage grouse lek #225 nearby) are issues of concern.

Pasture: Buckbrush (02)

Past Objectives: Improve the quality of deer/antelope winter range. Improve the middle ecological condition of the upland vegetative community.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is meeting the upland objective. Riparian watershed function is not functioning properly due to historic grazing. Annual rangelands (lower portions of the pasture have more than 25% annual grass cover) and special status species (sage grouse leks #59 and #351 nearby) are issues of concern.

Pasture: Turnout (03)

Past Objectives: Improve the quality of deer/antelope winter range.

Improve the early ecological condition of the upland vegetative community.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply riparian (improve) and upland (improve/maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitat at one site are in or making progress toward properly functioning condition. At the second site, the upland watershed function, ecological processes and riparian watershed function are not functioning properly due to historic grazing. Upland trends indicate the pasture is not meeting the upland objective. Annual rangelands and special status species (sage grouse leks #350 and #351 nearby) are issues of concern.

Pasture: Mountain (04)

Past Objectives: Maintain the late ecological condition of upland vegetative communities.

New Objectives: The long-term objective is to maintain the ecosite condition at late condition or DRFCs. Apply riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland trends and SRH indicate the pasture is meeting the upland objective. Riparian watershed function is not properly functioning due to historic grazing and current season-of-use. Special status species (sage grouse lek #351 and leks #350 and #59 nearby) are issues of concern.

Pasture: FFR (05)

Past Objective: None

New Objective: None

Data Summary: Condition Unknown

Pasture: Gathering (06)

Past Objectives: Improve the early ecological condition of upland vegetative communities.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply upland (maintain) objective.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends and SRH indicate that the pasture is moving towards the upland objective. Annual rangelands are an issue of concern although the condition is improving.

Pasture: Salters /State (07)

Past Objectives: None. In 1990, this was a newly established pasture and no upland objectives were assigned at that time.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply riparian (improve), wildlife (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function, one site for ecological processes and one site for wildlife habitats are in or making significant progress toward properly functioning condition. Riparian watershed function is not properly functioning, but the cause is unknown. One site each for ecological processes and wildlife habitats are not properly functioning due to historic grazing which has resulted in an invasion of weeds. Upland trends show a slight improvement. Annual rangelands, and weeds (whitetop and tumble mustard) are issues of concern.

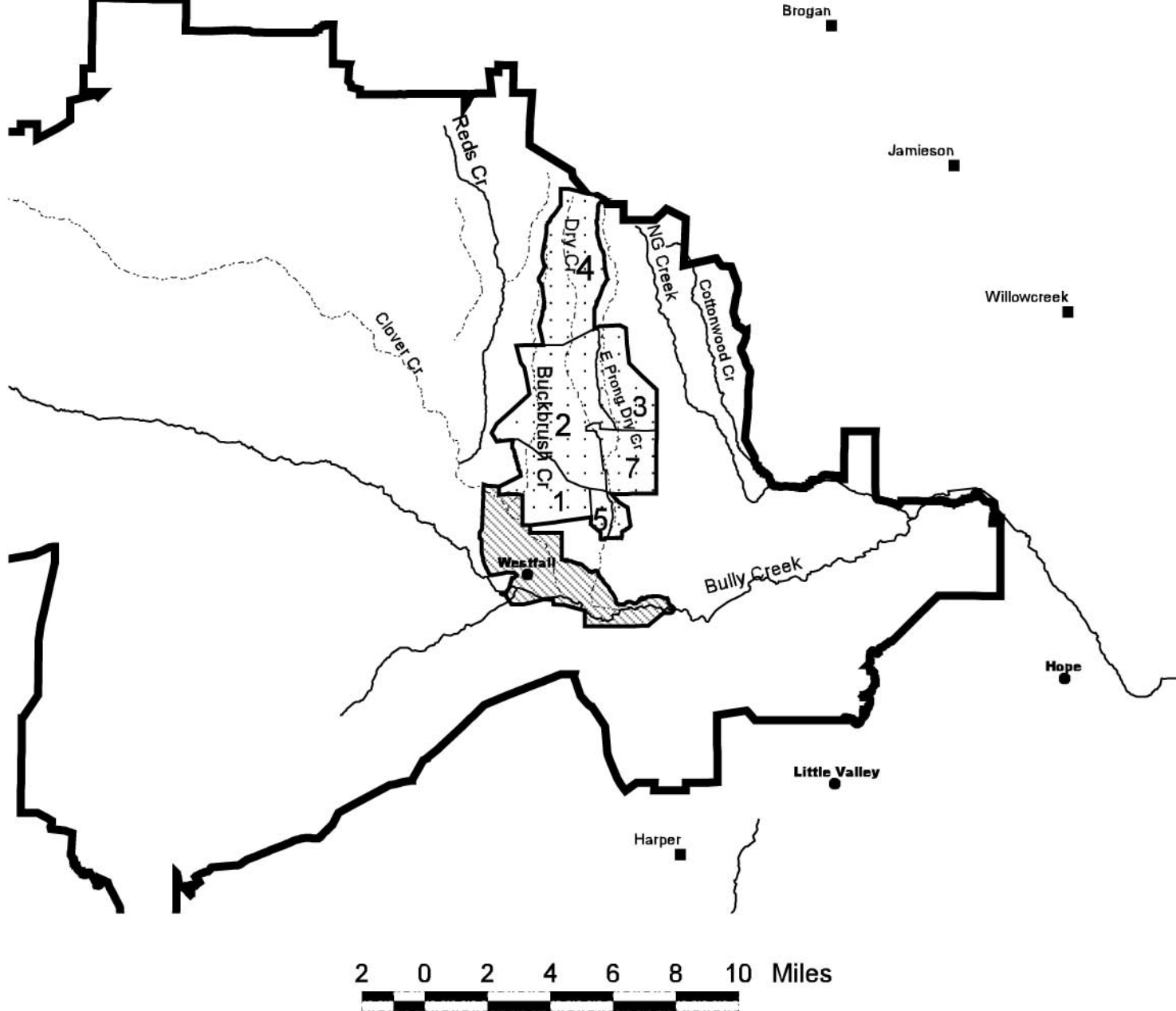
Pasture: Westfall (00227)/Westfall Seeding (01)

Past Objectives: Improve the quality of deer/antelope winter range by managing for 55% grasses, 25% forbs, and 20% shrubs.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to middle condition or DRFCs. Apply wildlife (improve), upland (improve) and seeding #2 objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not functioning properly. This is due to historic

grazing which resulted in reduced litter and cover, changes in cover distribution, lack of grass understory and no seed production or recruitment. There is a lack of community structure, excessive exotic species and no vegetative diversity. The shrub component is good. Upland objectives are not being met. Annual rangelands (high populations of whitetop and Scotch thistle) and wildlife (deer, sage grouse and pronghorn winter range) are issues of concern.



Map Legend

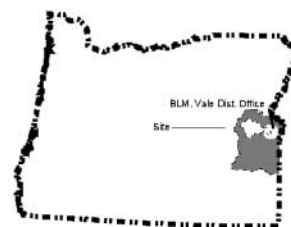
- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Buckbrush Pastures
- Buckbrush 10218
- ▨ Westfall 00227
- Landscape Area

Pasture Legend
Buckbrush Creek
1 Buckbrush Seeding
2 Buckbrush
3 Turnout
4 Mountain
5 Gathering
7 Salters/State

Pasture Legend
Westfall Seeding



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Willow Basin Allotment (10222)

Allotment Summary: Evaluations were conducted for this allotment in 1985 and 1995. Resource issues, including downward trends and riparian management, were addressed. As a result, some livestock use was suspended and a new grazing system implemented.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
400	100	5	25	5	15

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Indian Creek Ranch	7006	1117	249	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		------(miles)-----										
Juniper Springs	PFC			4.25			PFC	N	FAR	S	S	ND
North Cottonwood Seeding	FAR/PFC	0.25	0.5				FAR/PFC	N	PFC/PFC	SD	SU	D
Indian Creek	PFC/PFC		3.5				PFC/PFC	N	PFC/PFC	U	U	ND
Panhandle	PFC			1			PFC	N	PFC	S	SU	ND
North Fork	FAR		0.25				FAR	N	PFC	S	SU	ND
State Block	PFC			1.5			PFC	N	PFC	ND	S	ND
Willow Basin Creek	PFC			2.5		2.25	PFC		FAR	S	S	ND
Bully Creek	PFC	8.5	3.75	2	5		PFC	N	FAR	U	SU	D,SD

Pasture	Standards for Rangeland Health									Trends		
FFR	ND						ND		ND	ND	ND	NR
Shroyer FFR	ND						ND		ND	ND	ND	NR
FFR	ND						ND		ND	ND	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Juniper Springs	2, 5	2, 5	6/1-8/1	7/16-10/1	4/1-5/1 7/15-10/31	5/1-6/1	7/1-8/15	7/1-10/31
North Cottonwood Seeding		1, 2, 3	3/15-4/30	3/15-4/30	5/1-7/15	4/1-5/1	5/1-6/15	4/1-5/1
Indian Creek	2	2	6/1-8/1	6/15-10/1	3/15-5/1 7/15-10/31	4/1-6/1	4/1-5/1	7/1-10/31
Panhandle	2	2	3/15-4/30	3/15-4/30	5/1-7/15	4/1-5/1	5/1-6/31	4/1-5/1
North Fork		2, 3	3/15-4/15	4/1-4/30	5/1-7/15	5/1-6/1	4/1-4/30	4/1-5/1
State Block		2	4/15-5/15	7/16-9/30	4/1-7/15	10/1-10/31	7/1-8/15	7/1-10/31
Willow Basin Creek	2,5	2,5	8/1-10/31	5/1-7/15	7/16-10/31	7/1-10/1	8/16-9/15	5/1-7/1
Bully Creek	2, 5	2, 5	4/1-6/1	9/20-10/31	REST	6/1-7/1	9/15-10/30	5/1-7/1

Pasture Summaries:

Pasture: Juniper Springs (01)

Past Objectives: Improve middle ecological condition to late ecological condition of upland vegetative communities (1991 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve), and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is not meeting the upland objective. Riparian watershed function and wildlife habitats are not properly functioning due to historic grazing, current season-of-use (hot season grazing), juniper encroachment and deer impacts. This has resulted in high sediment loads in the stream. There is decadent bitterbrush with no reproduction and declining sagebrush communities. Cultural resources, juniper encroachment and special status species (sage grouse leks #42, #45, #47, and #45 adjacent) are issues of concern.

Pasture: North Cottonwood Seeding (02)

Past Objectives: Improve riparian zone along Indian Creek.

New Objectives: The long-term objective is to improve ecosite condition in the native vegetation communities to attain middle condition or DRFCs. Apply riparian (improve), upland (maintain) and seeding #3 objectives .

Data Summary: The native portions for the upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Wildlife habitats are properly functioning in the native range. The seedings are not properly functioning due to historic grazing resulting in a weakened seeding, bare ground and whitetop and cheatgrass invasions. Riparian watershed function is not properly functioning due to historic grazing and old dam structures (there are hydrological problems in the upper segments of the stream). Riparian trends indicate the riparian objective is being met. Wintering habitat for deer and sage grouse. Annual rangelands are an issue of concern.

Pasture: Indian Creek (03)

Past Objectives: Improve middle ecological condition to late ecological condition (1991 AMP no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trends indicate the pasture is moving towards meeting the upland objective. Riparian watershed function is not properly functioning due to historic and current grazing and upstream reservoir controls, juniper encroachment and Russian knapweed problems. Where the trend plot is located, there was an enormous amount of aroga moth kill noted during 1998 monitoring. Annual rangelands, wildlife habitat, juniper encroachment and weeds

(Russian knapweed) are issues of concern.

Pasture: Panhandle (04)

Past Objectives: Improve early ecological condition to middle ecological condition (1991 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply riparian (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. The long-term upland trends are not meeting the upland objective. Riparian watershed function is not properly functioning due to reservoir controls in the segment below the ranch. Annual rangelands, special status species (sage grouse winter habitat), wildlife (deer winter range) and weeds (Russian knapweed) are issues of concern.

Pasture: North Fork (05)

Past Objectives: Improve the riparian zone along the NF Bully Creek (identified to be in early seral condition in 1991 AMP). There were originally two North Fork pastures (East & West) identified in this allotment from the 1981 AMP. The 1991 AMP shows only 1 pasture with a riparian objective. The original North Fork West Pasture objective was to improve condition from middle ecological condition to late ecological condition within 15 years (by 1996).

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed function and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trend indicates the uplands are not meeting the upland objectives. Although the site has considerable potential, ecological processes and riparian watershed function are not properly functioning. Annual rangelands and weeds (Russian knapweed) are issues of concern.

Pasture: State Block (06)

Past Objectives: Improve middle ecological condition to late ecological condition (1991 AMP - no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in or making significant progress toward properly functioning condition. Upland trend indicates the pasture is not meeting the upland objective. Riparian watershed function is not properly functioning due to reservoir controls. Annual rangelands, wildlife (deer and pronghorn habitat) and special status species (sage grouse leks #51, #52 and #53) are issues of concern.

Pasture: Willow Basin Creek (07)

Past Objectives: Improve middle ecological condition to late ecological condition of upland vegetative communities (1991 AMP no time frames established).

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Forage production is suffering and bitterbrush is overused. Upland trend indicates the pasture is not meeting the upland objective. The uplands have limited vegetative cover. Riparian watershed function and wildlife habitat are not properly functioning due to historic and current grazing season-of-use (hot season). Annual rangelands, wildlife (deer, pronghorn and elk), special status species (sage grouse leks #41, #42, #44, #45 and #47, redband trout and spotted frogs) and weeds (Russian knapweed), and Special Management Area (1,622 acres of the Beaver Dam Creek WSA) are issues of concern.

Pasture: Bully Creek (08)

Past Objectives: Improve riparian areas of North Bully Creek, South Bully Creek, Puckett Creek, McArthur Creek, and Godding Creek (1991 AMP - no time frames established or other parameters).

New Objectives: The long-term objective is to improve ecosite condition to maintain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Upland trend indicates the pasture is not meeting the upland objective. Mountain sagebrush is decadent, and juniper and weeds are encroaching into all communities. Riparian watershed function and wildlife habitats are not properly functioning due to current and historic grazing, juniper encroachment and fire suppression. This has resulted in eroding soils and heavy sediment deposits. There is no regeneration of aspen/willow/birch. Wildlife (elk, deer, and songbird habitat), juniper encroachment, special status species (sage grouse lek #39, and redband trout), weeds (spotted knapweed at headwaters of South Bully Creek) and recreation (hunter camps, new OHV tracks developed into Puckett Creek and wood cutting), Special Management Area (8,366 acres of the Beaver Dam Creek WSA) are issues of concern.

Pastures: FFR (09)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: Annual rangelands and special status species (sage grouse lek #53, and leks #38, #40, #42, #52 nearby), Special Management Area (57 acres of the Beaver Dam Creek WSA) are issues of concern.

Pasture: Shroyer FFR (10)

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

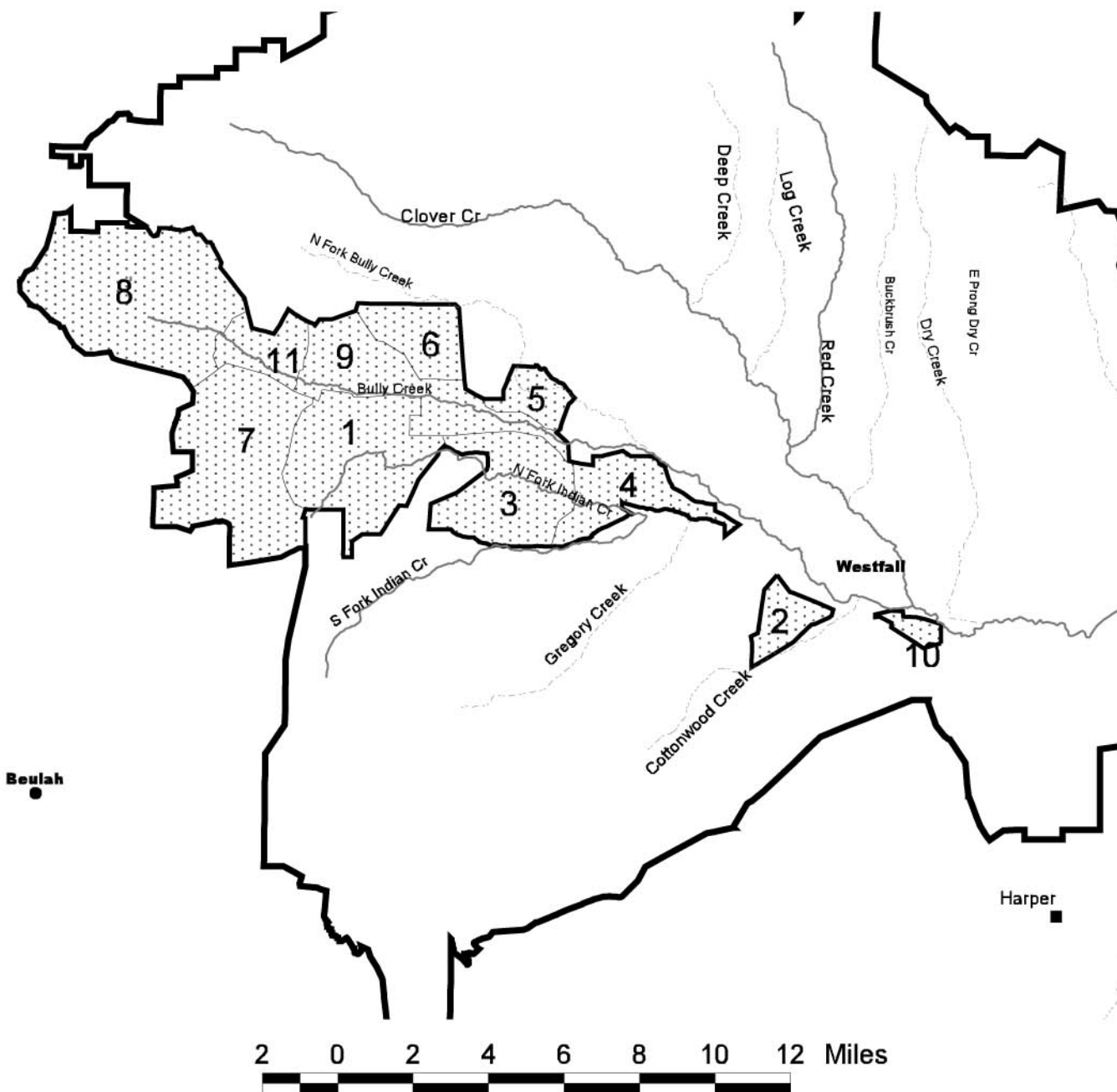
Data Summary: Annual rangelands are an issue of concern.

Pasture: FFR (11)

Past Objectives: None.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: Special status species (sage grouse lek #40, and leks #38, #39, #41 and #42 nearby) and Special Management Area (1,1064 acres of the Beaver Dam Creek WSA) are issues of concern.



Map C-9. Bully Creek Landscape Area
Willow Basin Allotment 10222



Pasture Legend Willow Basin

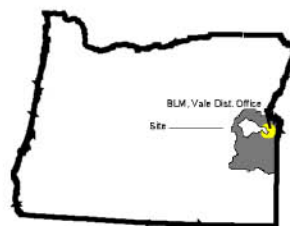
- 1 Juniper Springs
- 2 North Cottonwood Seeding
- 3 Indian Creek
- 4 Panhandle
- 5 North Fork
- 6 State Block
- 7 Willow Basin
- 8 Bully creek
- 9 FFR
- 10 Shroyer FFR
- 11 FFR

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- Willow Basin Pastures
- ▨ Willow Basin Allotment 10222
- ▭ Landscape Area



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Lava Ridge Allotment (10223)

Allotment Summary: Evaluations were conducted for this allotment in 1987 and 1991. The two seedings were shown to be heavily used with downward trends, and the Bully Creek pasture was divided to provide better riparian management. No changes were made to the scheduled grazing.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
100	50	5	25	10	25

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Chris Davis	1722	0	0	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		----- (miles) -----										
Hay Canyon	PFC		2	2.25			PFC	N	ND	S	U	ND
East Lava Seeding	FAR/PFC						FAR/PFC		FAR	D	SD	NR
West Lava Seeding	FAR/PFC						FAR/PFC		FAR	ND	ND	NR
North Bully Creek	FAR						PFC		FAR	ND	ND	NR
South Bully Creek	FAR		0.75	2			FAR	N	FAR	SU	SU	U
FFR	ND						ND		ND	ND	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule			Proposed Grazing Schedule		
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
East Hay Canyon		2	7/1-10/31	7/1-10/1	7/1-8/1	7/1-10/31	7/1-10/31	4/1-5/1
West Hay Canyon		2	7/1-10/31	7/1-10/7	7/1-8/1	5/1-7/1	5/1-7/1	REST To PVT: 5/1-7/1
East Lava Seeding		1, 3, 5	6/1-6/30	7/1-8/1	6/1-7/1	5/2-7/1	4/1-5/1	9/1-10/1
West Lava Seeding		1, 3, 5	5/1-5/30	6/1-7/1	6/1-7/1	4/1-5/1	5/1-7/1	9/1-10/1
North Bully Creek	1, 5		7/1-10/31	4/15-6/30	4/15-6/1	4/1-5/1	5/1-7/1	7/1-9/1
South Bully Creek	5	1, 2, 3, 5	3/20-4/30	3/15-4/30	3/15-4/15	5/2-6/15	4/1-5/1	4/1-5/1

Pasture Summaries:

Pasture: Hay Canyon (01)

Past Objectives: Maintain late ecological condition class (1986 AMP - no time frames established).

New Objectives: The long-term objective is to maintain ecosite condition at late condition or DRFCs. Apply wildlife (improve), riparian (improve), and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: Riparian watershed function is not properly functioning due to historic and current grazing (season-of-use). Weeds (whitetop and Scotch thistle) are invading the riparian areas. Upland trends indicate the pasture is meeting the upland objective. Although wildlife is not an issue of concern, elk and deer frequent the area later in the year. Special status species (one sage grouse lek) and juniper encroachment are issues of concern.

Pasture: East Lava Seeding (02)

Past Objectives: Improve early condition class to middle condition

within 15 years, minimize wolf plant accumulation and maximize availability of fall green-up regrowth for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle condition or DRFCs. Apply wildlife (improve), upland (improve) and seeding #2 objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not in properly functioning condition due to historic grazing. The seedings also receive heavy spring/summer pronghorn use. Annual rangelands and special status species (sage grouse lek #58, and leks #57 and #225 nearby) are issues of concern.

Pasture: West Lava Seeding (03)

Past Objectives: Improve early ecological condition class to middle condition within 15 years, minimize wolf plant accumulation and maximize availability of fall green-up regrowth for wildlife.

New Objectives: The long-term objective is to improve ecosite condition of the native vegetation communities to attain middle condition or DRFCs. Apply wildlife (improve), upland (improve) and

seeding #2 objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are not in properly functioning condition due to historic grazing. The seedings receive heavy spring/summer pronghorn use. No data are available for the West Lava Seeding but trend is represented by data from East Lava Seeding. A minor part of an ACEC (117 acres) lies within this pasture but is not an issue of concern.

Annual rangelands, and special status species (sage grouse leks #56, #57, and #58 nearby) are issues of concern.

Pastures: North Bully Creek (04)

Past Objectives: Improve upland areas to late ecological condition over the long-term. Within 15 years (by 2001) the short-term objective is to improve the pasture to middle ecological condition.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The ecological processes are in or making significant progress toward properly functioning condition. Upland watershed function and wildlife habitats are not properly functioning due to the current grazing (season-of-use; not enough deferment and/or rest in the

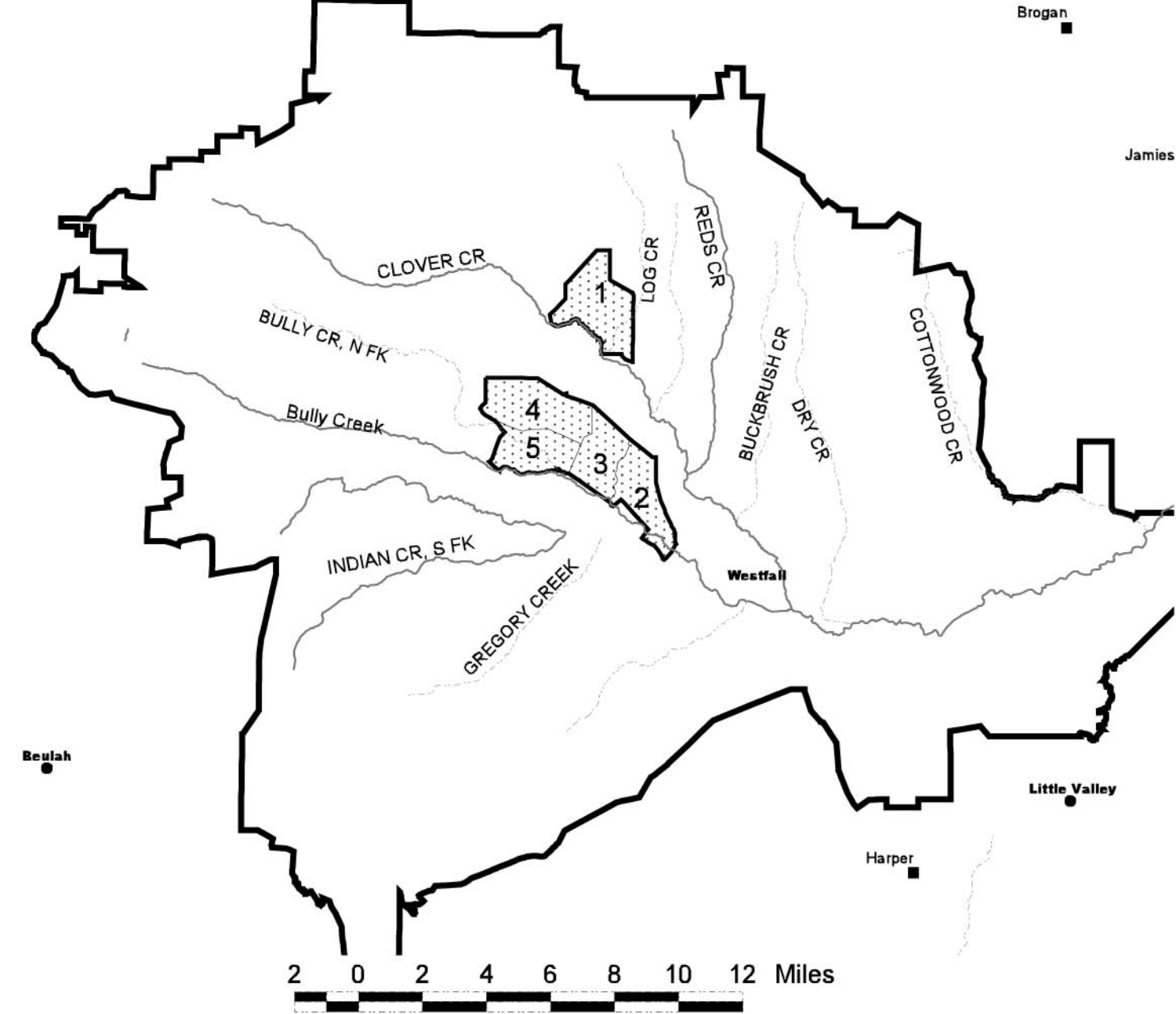
pasture). Livestock use is depleting sage grouse nesting habitat by removing grass understory. Upland trend indicates the pasture is moving toward meeting the upland objective. A minor part of an ACEC (44 acres) lies within the pasture. Annual rangelands in the southeast area of the pasture and special status species (sage grouse leks #55 and #56 nearby) are issues of concern.

Pasture: South Bully Creek (05)

Past Objectives: Attain an upward trend on both riparian and upland areas. Improve upland areas to late ecological condition over the long-term. Within 15 years (by 2001) improve the pasture to middle ecological condition. Improve at least half of the riparian areas to pristine condition by 1990.

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives.

Data Summary: Upland watershed function, riparian watershed function, ecological processes and wildlife habitats are not properly functioning due to historic grazing and other unidentified causes. A large portion of this pasture is vulnerable to weed invasion. Annual rangelands are an issue of concern.



Map C-10. Bully Creek Landscape Area
Lava Ridge Allotment 10223

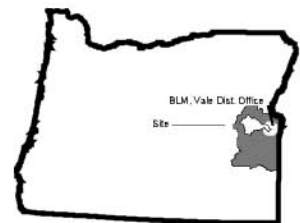
Pasture Legend
 Lava Ridge
 1 Hay Canyon
 2 East Lava Ridge
 3 West Lava Ridge
 4 North Bully Creek
 5 South Bully Creek

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- ▨ Lava Ridge Pastures
- ▨ Lava Ridge Allotment 10223
- ▭ Landscape Area



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West Bench Allotment (20104)

Allotment Summary: An evaluation was completed for this allotment in 1993. The early seral conditions were noted and specific grazing management was implemented to promote upward trends.

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
75	125	5	5	0	0

Source: SEORMP Appendix E

Past Objectives: Objectives in this allotment have been developed at the pasture level.

New Objectives: See individual pasture summaries.

Operator Information:

<u>Operator Name</u>	<u>Active AUMs</u>	<u>Suspended AUMs</u>	<u>Exchange of Use</u>	<u>Season of Use</u>
Randy Hyde	52	14	0	4/1-10/31
Bill Moore	100	28	0	4/1-10/31

Data Summary

Pasture	Standards for Rangeland Health									Trends		
	1	2					3	4	5	Upland Long-term	Upland Short-term	Riparian Overall
		PFC	FARU	FARN	FARD	NF						
		------(miles)-----										
East	PFC						FAR		ND	S	ND	NR
West	PFC						PFC		ND	SU	ND	NR

Grazing Schedule

Pasture	Reason for not meeting Standards 1-5		Allotment Management Plan Grazing Schedule		Proposed Grazing Schedule	
	Caused by Current Grazing	Caused by Other Factors	Year 1	Year 2	Year 1	Year 2
East	3	3	6/1-7/15	4/16-5/31	4/15-7/1 or 7/15	7/15-9/30
West			4/16-5/31	6/1-7/15	7/15-9/30	4/15-7/1 or 7/15

Pasture Summaries:

Pasture: East (01)

Past Objective: Increase palatable winter browse production by 20% by 1990.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply wildlife (improve) and upland (improve) objectives.

Data Summary: The upland watershed function is in or making significant progress toward properly functioning condition. The ecological processes are not properly functioning due to historic and current grazing (season of use) resulting in invasion of annual weeds (Russian thistle, cheatgrass and morning glory). Annual rangelands and

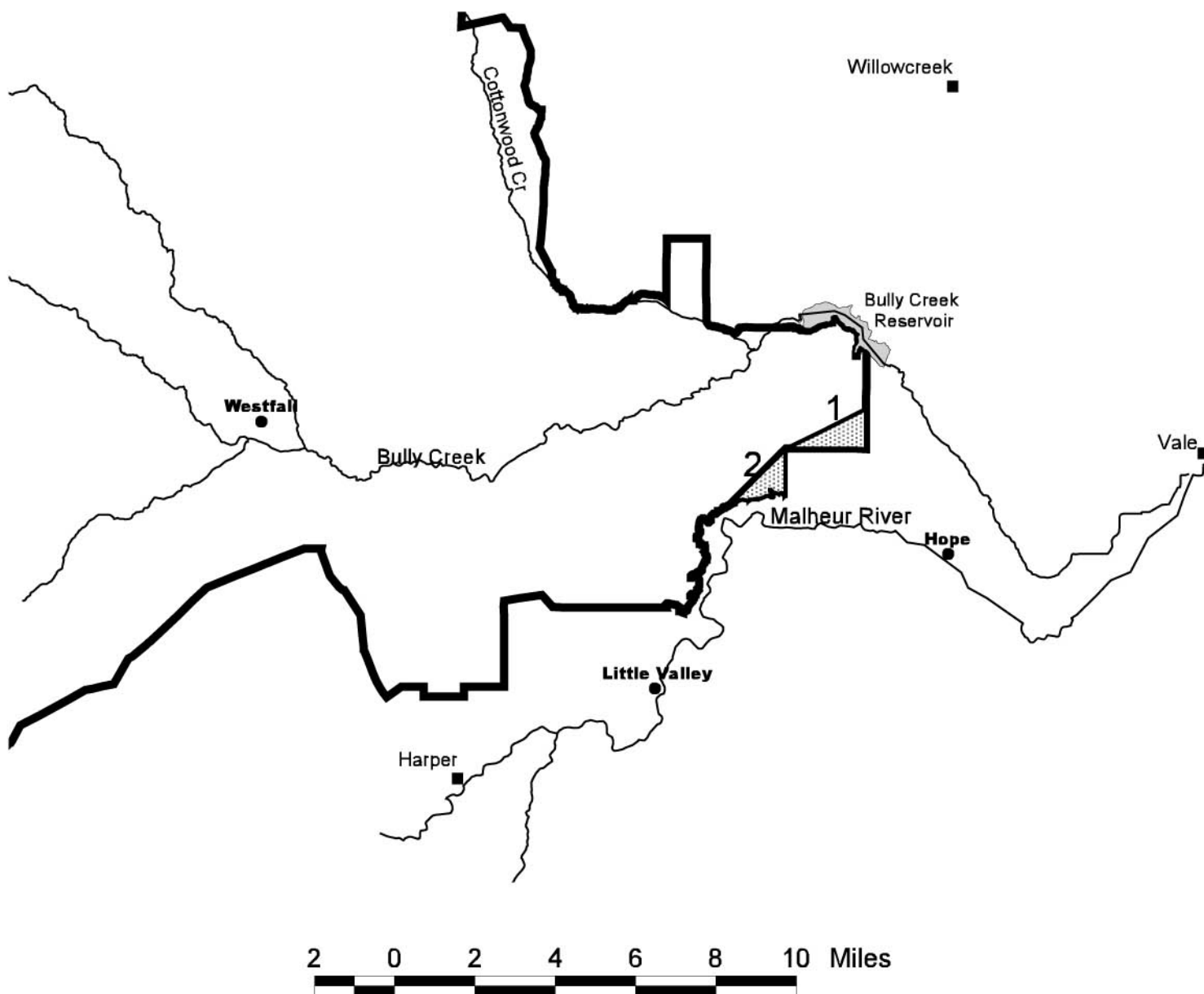
wildlife (pronghorn winter range) are issues of concern.

Pasture: West (02)

Past Objectives: Increase palatable browse production by 20% by 1990.

New Objectives: The long-term objective is to improve ecosite condition to attain middle condition or DRFCs. Apply wildlife (improve) and upland (maintain) objectives.

Data Summary: The upland watershed function and ecological processes are in or making significant progress toward properly functioning condition. Historic and current grazing (season of use) have resulted in invasion of annual weeds (Russian thistle and cheatgrass). Annual rangelands and wildlife (pronghorn winter range) are issues of concern.



Map C-11. Bully Creek Landscape Area
West Bench Allotment 20104



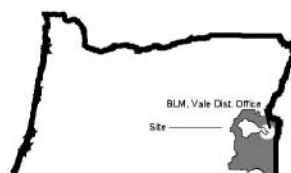
**Pasture Legend
West Bench**

1 East
2 West

Map Legend

- Places
- Cities
- △ Perennial Streams
- Surface Water
- ▨ West Bench 20104
- Landscape Area

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C Allotments

Allotment Summary: Grazing in C allotments will remain authorized in conjunction with private lands as long as public land management objectives are met.

Allotment: Boston Horse Camp (00113)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
50	15	0	0	15	15

Source: SEORMP Appendix E

Pasture: Boston Horse Camp (01)

Operator Information: Rex Knudson

Active AUMs: 83; Suspended AUMs: 162

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (maintain) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological processes are in properly functioning condition. Riparian watershed function is not properly functioning due to historic grazing and current wildlife populations. Aspen regeneration is lacking. Special status species (sage grouse lek #48 nearby) is an issue of concern.

Allotment: Juniper Mountain (00134)

Forage demand for ODFW big game management objectives (number of animals):

Bully Creek LAMP Appendix C

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
50	5	5	0	15	15

Source: SEORMP Appendix E

Pasture: Juniper (01)

Operator Information: Paul Martin

Active AUMs: 126; Suspended AUMs : 0

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: Part of Brady Creek is in this pasture above private lands. There are no data available. No issues of concern have been identified.

Allotment: Cow Creek Individual (00144)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
75	22	25	25	15	15

Source: SEORMP Appendix E

Pasture: Cow Creek (01)

Operator Information: Brian Carmichael

Active AUMs: 112; Suspended AUMs: 218

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed function and ecological processes are not properly functioning. There are no data for the riparian areas. Juniper encroachment is an issue of concern.

Allotment: Scratch Post Butte (00228)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
65	15	25	0	30	30

Source: SEORMP Appendix E

Pasture: Scratch (01)

Operator Information: Ironside Associates

Active AUMs:132; Suspended AUMs: 0

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function, ecological processes and wildlife habitats are in properly functioning condition. There are no data for the riparian areas. Juniper encroachment and special status species (sage grouse leks #49 and #50) are issues of concern.

Allotment: Post Creek Individual (00244)

Bully Creek LAMP Appendix C

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
50	5	15	0	10	0

Source: SEORMP Appendix E

Pasture: Post (01)

Operator Information: Anita and WM Butler

Active AUMs: 98; Suspended AUMs: 228

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply riparian (improve) and upland (improve) objectives.

Data Summary: The upland watershed function and ecological processes are in properly functioning condition. Data was collected for riparian watershed function during the FY 1995 Riparian Evaluations. There is no fence between Cow Creek Individual and Post Creek Individual C allotments. Juniper encroachment is an issue of concern.

Allotment: Ferriers Gulch (10141)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
45	5	15	0	10	0

Source: SEORMP Appendix E

Pasture: Ferriers (01)

Operator Information : Carl Mc d'Roe

Active AUMs: 28; Suspended AUMs: 26

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply upland (improve) objectives.

Data Summary: Short-term upland trend is static (plot established in 1995). Juniper encroachment may become an issue. No issues of concern have been identified.

Allotment: Clover Creek Individual (10210)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
150	25	15	0	30	30

Source: SEORMP Appendix E

Pasture: Clover Creek (01)**Operator Information:** Charles Wilcox

Active AUMs: 248; Suspended AUMs: 205

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply wildlife (improve), riparian (improve) and upland (improve) objectives. Sage grouse nesting habitat.

Data Summary: The upland watershed function and ecological

processes are in properly functioning condition. Special status species (sage grouse leks #50 and Hay Canyon lek nearby) are an issue of concern.

Allotment: West Clover Creek (10213)

Forage demand for ODFW big game management objectives (number of animals):

<u>Deer</u>		<u>Pronghorn</u>		<u>Elk</u>	
Summer	Winter	Summer	Winter	Summer	Winter
150	25	35	0	30	10

Source: SEORMP Appendix E

Pasture: West Clover (01)**Operator Information:**

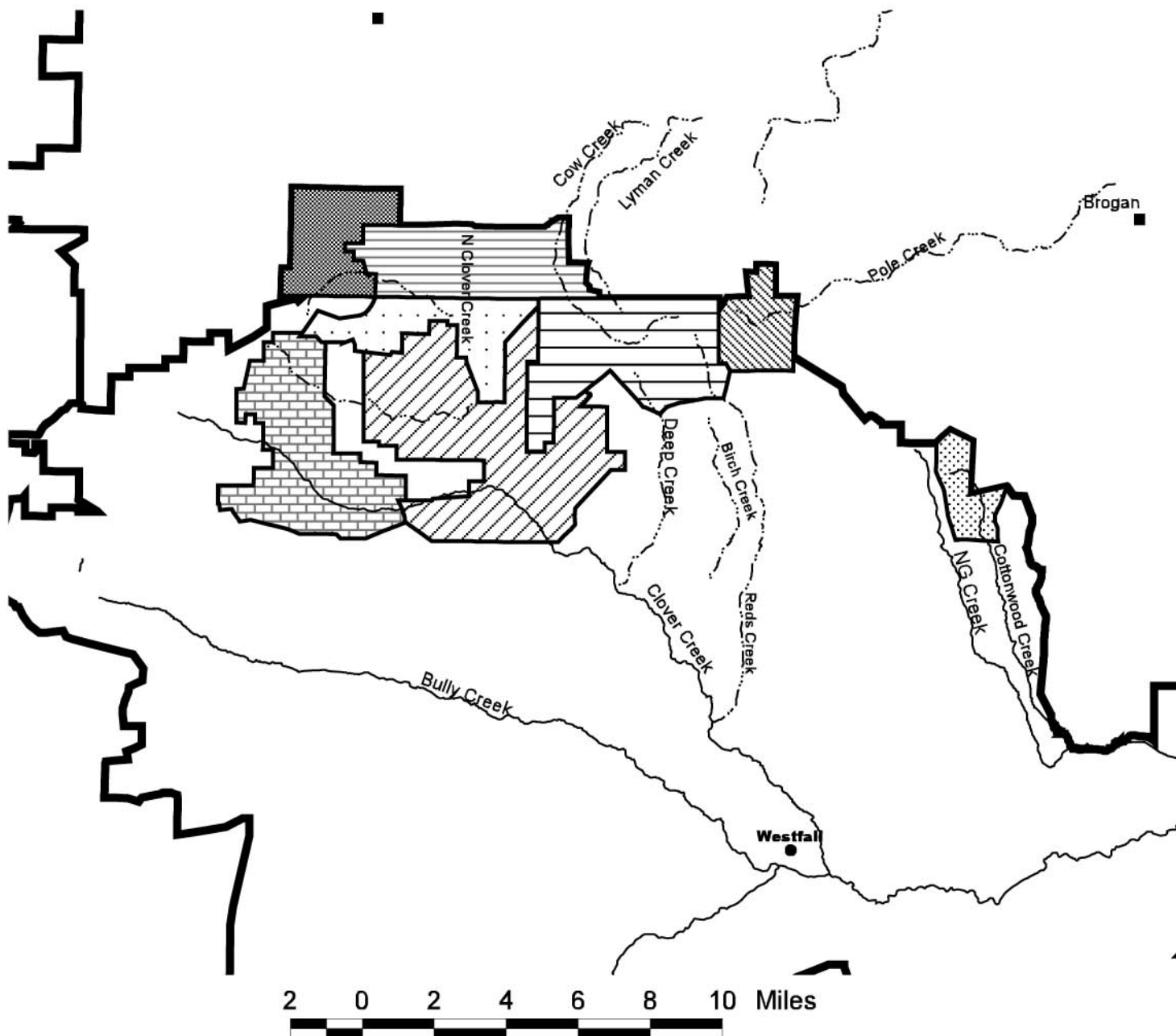
	Active AUMs	Suspended AUMs
Rick Wilcox	23	20
William Rupp	212	180

Past Objectives: None

New Objectives: The long-term objective is to improve ecosite condition to attain late condition or DRFCs. Apply upland (improve) objective.

Data Summary: The upland watershed function and ecological processes are in properly functioning condition. Beaver Dam Creek WSA (394 acres) lies within this pasture. Juniper encroachment and Special Management Areas (394 acres of Beaver Dam Creek WSA) are issues of concern.

insert Map C-12 Bully Creek Landscape Area C Allotments



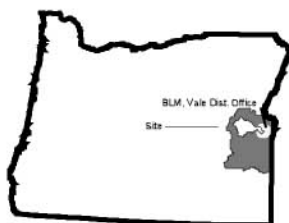
Map C-12. Bully Creek Landscape Area
C Allotments

Map Legend

- Places
- Cities
- Intermittent Streams
- Perennial Streams
- ▨ Boston Horse Camp 00113
- ▨ Juniper Mountain 00134
- ▨ Cow Creek Indv 00144
- ▨ Scratch Post Butte 00228
- ▨ Post Creek Indv 00244
- ▨ Ferriers Gulch 10141
- ▨ Clover Creek Indv 10210
- ▨ West Clover Cr 10213
- ▨ Landscape Area



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Appendix D
Environmental Assessment
No. OR-030-99-019

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Appendix

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Bully Creek Landscape Area Management Project
Environmental Assessment No. OR-030-99-019

1.0 INTRODUCTION

1.1 Purpose and Need

This Environmental Assessment (EA) has been developed to inform the public and the BLM decision maker of the environmental, technical and economic factors involved with implementing any one of three management strategies within the Bully Creek Landscape Area Management Project (LAMP). See Sections I-IV of the LAMP for a complete discussion of these topics.

1.2 Conformance with Land Use Plans

The Proposed Action is consistent with the analysis of significant impacts in several large-scale planning documents: the *Northern Malheur Management Framework Plan* (USDI/BLM 1979); the *Rangeland Program Summary* (USDI/BLM 1982); and with the intent and management direction identified in the draft Interior Columbia Basin Ecosystem Management Project (ICBEMP) (USDI/BLM 1997), and the draft Southeastern Oregon Resource Management Plan/Environmental Impact Statement (SEORMP/EIS) (USDI/BLM 1998). The *Ironside Grazing Management Environmental Impact Statement* (USDI/BLM 1980a, 1980b) was consulted. The *Scientific Assessment* (USDA 1996a) and *Summary of Scientific Findings* (USDA 1996b) from the draft ICBEMP (USDA/USDI 1997) provided the broad-scale science used during the landscape area assessment in the LAMP. The ‘science’ was also used to develop subbasin level findings for the *Bully Creek, Willow Creek and Lower Malheur River Subbasin Review* (USDI/BLM 1998a). The *Bully Creek Watershed Assessment and Strategy* (BCWC 1997) and the draft *Malheur Basin Watershed Action Plan and Assessment* (MOWC 1998), two documents addressing watershed management activities on private land within the Bully Creek subbasin, were consulted and referenced during development of the Proposed Action.

1.3 Relationship to Other Plans

The Bully Creek Watershed Coalition (BCWC) and the Malheur-Owyhee Watershed Council (MOWC) have prepared watershed assessments or strategies (BCWC 1997; MOWC 1998) which address resource concerns on adjoining and surrounding private

land within the Bully Creek subbasin. The goals, objectives and resource concerns in these two documents are similar to those identified in the LAMP. Although BLM is the largest land manager within the landscape area, the success of ecosystem restoration relies on coordinating activities between all interested parties.

1.4 Management Directions Common to All Alternatives

Compliance with policy and direction for livestock grazing on public lands would follow the Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington (SRH) (USDI/BLM 1997; USDI/BLM 1998b-Appendix Q). The authorized officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining, through assessment or monitoring, that a standard is not being achieved and that livestock are a significant contributing factor to the failure to achieve the standards and conform with the guidelines (43 CFR 4180.2).

Desired wildlife habitat conditions and mitigation measures, as described in the draft SEORMP/EIS Appendix F (USDI/BLM 1998b), would be followed to ensure projects and other management activities are designed and carried out to minimize negative impacts to wildlife species and their dependent habitats in the landscape area. This involves wildlife habitat security and human disturbances, impacts from structural projects, and vegetation management.

Best Management Practices (BMPs), as described in the draft SEORMP/EIS Appendix O (USDI/BLM 1998b), would be followed for activities involving road design and maintenance, surface-disturbing activities, rights-of-way and utility corridors, forest management, fire suppression, prescribed fires, livestock grazing management, mining, wildlife habitat protection, noxious weed management, and developed recreation. BMPs are designed to maximize beneficial results and minimize negative impacts of management actions. Interdisciplinary site-specific analysis may identify modifications necessary to minimize the potential for negative impacts.

Rangeland improvement projects would follow standards and design elements described in the draft SEORMP/EIS Appendix S (USDI/BLM 1998b). Design elements have been standardized over time to mitigate impacts encountered during construction. Specific design features have been developed for reservoir construction, well drilling, spring development, pipelines, fences, wildlife guzzlers, and prescribed fire.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Alternative A - Proposed Action/Implement the Bully Creek LAMP

The Proposed Action would be to implement the recommendations as described in the Bully Creek LAMP (Section 7.0). Resource conditions are largely due to historic and current livestock grazing practices and associated activities, in addition to changes in fire patterns, behavior and frequency. Livestock grazing would be one of the management tools used to achieve resource objectives because livestock grazing has been the dominant use across the landscape. For this reason the majority of the recommendations developed enable more effective livestock management. For example, allotment and pasture division fencing allows greater control of livestock within critical riparian areas, improves livestock distribution in uplands and seedings to encourage better forage utilization, helps improve overall habitat conditions, and alleviates impacts to sage grouse strutting, nesting and wintering areas. To further protect sensitive resources and focus on resource needs, specific forage utilization levels, season and duration of use for livestock would be prescribed on a pasture-by-pasture basis. In addition, range-readiness criteria, and wildlife habitat restrictions have been designed to address sensitive resources (LAMP Tables 7 and 8).

The recommendations proposed in the LAMP include a variety of activities where standardized descriptions and methods for implementation have been analyzed and adopted in existing land use plans and EIS's (USDI/BLM 1980a, 1980b, 1982, 1998b). The activities would include: (1) implementing a grazing management strategy for 20 allotments; (2) constructing rangeland improvement projects (springs, pipelines and water troughs, fences, reservoirs and windmills; conducting maintenance on and reconstruction of existing projects); (3) rehabilitation activities of upland (including forest ecosystems) and riparian habitat such as treating vegetation using prescribed fire, mechanical, chemical and biological control; and (4) various other follow-up monitoring, data collection and administrative activities to be conducted during the course of the project. These activities are also directly and indirectly related to other actions such as access management and revegetation.

Grazing schedules were developed considering pasture carrying capacity levels and are shown in the LAMP, Appendix C. To effectively implement the grazing schedules, specific rangeland improvement projects were identified for construction beginning in FY1999. These projects are critical to maintaining a grazing program while protecting resources and have been identified by priority so that those needed to implement the grazing schedules would be completed first. BLM anticipates all grazing schedules to be fully implemented in FY 2001. Proposed projects and site-specific information would be

further refined in subsequent years, prior to their implementation. The list of proposed projects and their anticipated construction/implementation year(s) is shown in the LAMP, Appendix A, Table A-8. This project list is based on current resource conditions, and is subject to additions or deletions, as conditions warrant, to meet stated objectives.

2.2 Alternative B - Suspension of Use

In 24 pastures within 8 allotments (see Table 1) where SRH (USDI/BLM 1997) are not being met, and current livestock grazing is determined to be the primary cause, livestock grazing would be suspended. This suspended use would be for a minimum of 3 years or until monitoring shows resource conditions are moving towards meeting the standards as defined in SRH guidelines and the LAMP objectives. Resumption of livestock grazing in those pastures would only be permitted where there is a reasonable expectation that grazing could occur without setbacks in recovery. Grazing schedules, forage utilization levels, and season of use in those pastures where grazing use is not suspended would be similar to the Proposed Action. In allotment pastures still available for grazing, schedules would be developed to address the same resource issues, objectives, and concerns as used for the Proposed Action.

Projects constructed with implementation of Alternative B would be similar to Alternative A, Proposed Action (see the LAMP Appendix A, Table A-8). The projected year of construction would differ between the two alternatives. The priority of implementing vegetation manipulation projects (e.g., prescribed fire in communities dominated by juniper and seeding in cheatgrass range) would be unchanged so as to achieve SRH in vegetation communities dominated by woody or annual species. The priority of implementing structural rangeland projects (e.g., pasture division fences and water developments) in pastures which meet or are progressing toward meeting SRH would also not differ from the Proposed Action, since many of these projects are proposed to accelerate progress toward meeting SRH or meeting management objectives. The priority of constructing projects in pastures where SRH are not met or substantial progress has not been made would differ from the Proposed Action in that these projects would not be necessary until progress toward meeting SRH has been attained through livestock exclusion. Structural project construction in pastures where livestock are temporarily excluded would become a priority once the decision has been made to reintroduce livestock grazing.

Table 1. Allotments/Pastures Not Meeting SRH, Caused by Current Livestock Grazing Practices

Allotment	Pasture	Pasture Acreage	Allotment Acreage	AUMs suspended
Allotment #2	Mountain	10,916		
		Pasture Total	10,916	48,500
Allotment #3	Jones	10,320		
	North Black Canyon	5,488		
	Swamp Creek Seeding	4,012		
	North Studhorse	9,277		
	South Black Canyon	8,108		
	Upper Pole Creek	4,502		
	Lower Pole Creek	2,205		
	E. Cottonwood Seeding	2,506		
	W. Cottonwood Seeding	4,754		
		Pasture Total	51,172	77,694
Rail Canyon	Kitten Canyon	Pasture Total	6,115	22,639
Brian Creek	North NG Seeding	1,151		
	South NG Seeding	889		
	Mountain (N and S)	2,776		
		Pasture Total	4,816	4,816
Buckbrush	Mountain	5,103		
	Buckbrush Seeding	2,795		
		Pasture Total	7,898	20,067
Willow Basin	Juniper Springs	6,736		
	Willow Basin Creek	9,005		
	Bully Creek	10,015		
	Indian Creek	5,306		
	Panhandle	3,009		
		Pasture Total	34,071	43,455
Lava Ridge	South Bully Creek	1,758		
	North Bully Creek	2,999		
		Pasture Total	4,757	11,069
West Bench	East	Pasture Total	626	1605
Total active AUMs in LAMP area allocated to livestock		42,366		
Total AUMs Proposed for Suspension		17,598		
% of Total AUMs Proposed for Suspension		41%		
Total Acreage Proposed for Suspension		120,371		
Total Acreage Currently being Grazed		266,579		
% of Total Acreage Proposed for Suspension		45%		
Number of Operators Potentially Impacted by Proposed Suspension		12		

Source : Malheur Resource Area Interdisciplinary Team, Vale District BLM, 1998.

2.3 Alternative C - No Action

Current management would continue within the landscape area as described in Section 5.0 of the LAMP. Livestock grazing would continue as described in existing Allotment Management Plans (AMPs), subject to evaluation, SRH assessment and modification in regular cycles. Implementation of rangeland improvement projects and other activities would occur as in the past on a site-specific basis as needed without considering the implications (positive or negative) the action(s) may have on the interconnected parts of the landscape area, including adjoining private land. Existing pasture-specific objectives stated in AMPs are outdated, and in some cases have not been met. For analysis purposes for this alternative, current management will be considered as that which is now occurring and will not attempt to define changes that may or may not occur as a result of evaluation and SRH assessment. Rangeland projects would occur at the same rate and extent as in the last 10 years in allotments in the landscape area.

2.4 Alternatives Considered But Not Analyzed in Detail

Additional actions were considered but will not be further analyzed. These are actions that either would not be consistent with current Land Use Plans, identified objectives, current law or policy or are not viable. Actions considered but not carried forward include the following:

- ! Complete elimination of livestock grazing. A No Grazing Alternative was analyzed in the Ironside Grazing EIS and was not selected for implementation and does not need to be analyzed again.
- ! Suspension of all activities within the landscape area. This would not be consistent with the current land use plans, laws or policy.
- ! More extensive rangeland improvement development beyond that which is financially viable.

3.0 AFFECTED ENVIRONMENT

The affected environment is described in the LAMP, Section 5.0: Characterization of the Landscape.

3.1 Critical Elements of the Human Environment

The following critical elements are either not present or not affected by the proposed action or the alternatives

- Native American Religious Concerns
- Environmental Justice
- Unique or Prime Farmlands
- Hazardous Wastes

The remainder of the critical elements are addressed in Section 4.0 Environmental Consequences of this EA.

4.0 ENVIRONMENTAL CONSEQUENCES

This section analyzes the potential beneficial and adverse environmental direct, indirect and cumulative impacts to resources by implementing any one of the three alternatives. This chapter is arranged by resources with each alternative discussed under each resource value. The baseline used for impacts is the current condition or situation as described in the LAMP, Section 5.0. More pasture-specific resource conditions are described in the LAMP, Appendix C. Impacts are projected to be short-term (0-10 years) and long-term (10-20 years). Refer to Appendix 1 for a comparative summary of the impacts affecting each resource by alternative.

4.1 Air Resources

4.1.1 Alternative A (Proposed Action)

The airshed rating in the landscape area is Class II (*Clean Air Act as amended 1990*). Direct and indirect impacts from project implementation related to dust and smoke emissions would be localized and transitory in nature, even during peak use periods. Prescribed fire to restore ecosystem function in some vegetative communities (juniper woodlands and sagebrush habitats) would be conducted over the course of LAMP implementation. This activity is expected to increase the release of overall emissions, but would not exceed the impacts as addressed under Alternative C of the Draft SEORMP/EIS (USDI/BLM 1998b). The exact acreage, location and timing of prescribed fire would be specified and impacts addressed, as necessary, in subsequent NEPA analysis and in fire management plans. Any prescribed fire would be conducted to conform to applicable State and Federal air quality standards, and no long-term smoke impacts are expected. The Rail Canyon prescribed fire would be initiated, as approved, during 1999 (EA No. OR-030-98-014).

4.1.2 Alternative B (Suspended Use)

Under this alternative, the direct and indirect impacts from project implementation would be slightly less due to less prescribed burns.

4.1.3 Alternative C (No Action)

Minor short term impacts to air quality may occur during the Rail Canyon prescribed fire scheduled for implementation in 1999 (EA No. OR-030-98-014). Under this alternative, impacts to air quality would be less than under Alternative A (Proposed Action) due to fewer prescribed burns.

4.2 Geology, Energy and Mineral Resources

4.2.1 All Alternatives

As none of the alternatives propose to restrict opportunities for energy and mineral exploration and development in the landscape area, there would be no adverse impacts to these resources, regardless of the alternative implemented.

4.3 Soils

4.3.1 Alternative A (Proposed Action)

Analysis of the data collected during the SRH assessment process determined that 40-100 percent of the sites assessed within 20 pastures showed deficiencies in meeting Standard 1 (LAMP Table 2) dealing with the upland watershed functions (LAMP Appendix C). Soils at these sites showed deficiencies in either infiltration and permeability rates, moisture storage or stability from appropriate levels expected for this climate and landform.

Eighty-nine pastures of the total 109 assessed within the LAMP where soil processes are meeting the standards would continue to improve towards desired range of future conditions (DRFCs). In the 20 pastures where soils are preventing the attainment of Standard 1 (Upland Watershed Function), the Proposed Action would allow progress towards meeting the standard and DRFCs. Proposed grazing schedules with vegetation utilization limits developed with the Proposed Action would allow more vegetation to remain in areas thereby retaining adequate plant litter to maintain soil productivity and limit accelerated erosion.

Implementation of maximum allowable utilization levels and residual herbaceous vegetation heights (LAMP Table 7) measured at the end of the grazing or growing season would provide adequate ground cover to protect soils from spring runoff. Before riparian values are seriously damaged, management action(s) including herding, temporary or permanent fencing, providing alternate water sources or early removal of livestock from that pasture will be implemented. Periodic monitoring would also still occur ensuring soil objectives identified in the LAMP were met. Range readiness criteria for early turnout and drought conditions (LAMP Table 8) designed to protect soils from compaction and erosion would also ensure that upland and riparian soils could withstand grazing pressure.

If prescribed burns or other mechanical/chemical treatments to vegetation are successfully conducted according to management plans, short-term direct and indirect impacts, as well as, long-term impacts are expected soils. Short-term direct impacts include increased soil

compaction and displacement from any off-road vehicle use and increased sediment and soil movement from runoff entering watersheds and decreased water quality. Short-term indirect impacts could include the possibility of increased silt production into streams. The increased silt load would cover fish eggs and suffocate fry affecting populations of fish and amphibians until silt loads were scoured out of these stream reaches. Long-term impacts would be positive to soil conditions as desired vegetation would begin to reestablish and provide protection. Soil-water storage would improve with the reestablishment of native grasses and reduction of undesirable woody species in parts of the landscape area.

Implementation of the projects in the Proposed Action are expected to have short-term impacts to soils (erosion) due to soil and vegetation disturbance. Long-term impacts would be positive to soil conditions as desired vegetation begins to reestablish and provide protection. Soil-water storage would improve with the reestablishment of native grasses and reduction in encroaching juniper in parts of the landscape area. Surface disturbance would be kept to a minimum and rehabilitated to blend into surrounding areas. Revegetation would occur as needed with adapted perennial species to stabilize soils and preclude invasion and dominance of undesirable and weedy species. Existing roads and ways would be used, whenever possible. Any necessary off-road travel would be done to minimize impacts to soils and other resources. Where feasible, off-highway vehicles with large, low pressure tires would be used. Traveling through riparian areas would be avoided wherever possible.

Recreation activities (camping and off-highway vehicle use) and vehicle access would continue to cause moderate to low soil impacts in localized areas. Impacts result from compaction, surface runoff, and wind erosion. In several areas (Pole Creek and Rail Canyon), roads cross through riparian areas and aquatic habitats. There has been no proposal to relocate or close roads, and direct and indirect impacts to soils and downstream water quality is expected to continue in these areas.

4.3.2 Alternative B (Suspended Use)

Impacts to soil resources would be similar to Alternative A (Proposed Action). In areas where grazing is suspended for 3 years, soil resources would be positively impacted by the ungrazed vegetative cover and lack of surface disturbance. Those 89 pastures where soil processes are meeting the standards would continue to improve towards DRFCs. Where soils are preventing the attainment of the standards (20 pastures), Alternative B would allow progress towards meeting the standards and DRFCs. Long-term impacts to soil resources would be similar to the Proposed Action as grazing is allowed after attaining the standards. Implementation of the projects under this alternative would have similar impacts to soil resources as Alternative A (Proposed Action).

4.3.3 Alternative C (No Action)

Under current management strategies, impacts to soils resources would exist as they do at the present time. Those 89 pastures meeting Standard 1 and in functioning condition would remain as they are. Degraded conditions would continue in 20 pastures not meeting Standard 1. Grazing systems would need to be developed (through AMP revisions) which address resource problems, including recommendations to stabilize soils. Prescribed fire would not be as aggressive as Alternative A (Proposed Action), which may reduce short-term soil impacts, but may actually cause increased erosion in the long-term.

4.4 Vegetation

4.4.1 Alternative A (Proposed Action)

4.4.1.1 Impacts to Upland Vegetation

Implementation of forage utilization limits and grazing schedules with periodic rest or deferment from critical growing season grazing would allow vegetation types with native and introduced perennial grasses to improve or remain stable. These actions would promote plant vigor, seed production, seedling establishment, root production, and litter accumulation for herbaceous plants in upland ecosystems. As a result, 22 of the 36 upland trend studies moving towards current upland objectives would continue to do so over the short-term (10 years). Little change in vegetation composition would be expected in types now dominated by annual species except where some type of vegetation manipulation and seeding would be applied.

Sagebrush and western juniper cover would be expected to decrease slightly and grass cover to increase correspondingly due to wildfire and vegetative manipulation projects such as prescribed fire, brush beating and seeding with native and desirable non-native species. Prescribed fire would cause a short-term decrease in vegetative cover with a long-term increase in herbaceous cover, species diversity, and forage production. Brush beating would alter species composition and increase herbaceous species composition and cover while increasing forage production. Seeding with native and desirable non-native species would improve perennial species diversity where a forb mixture is used and would improve cover and forage production. The combination of these type of projects would lead to more diverse and healthy vegetative communities, especially as areas that are dominated by annual or single species are converted to more diverse perennial species.

Sustained or slightly reduced livestock grazing would return plant litter to the soil. Long-term vigor and health of vegetation, including maintenance of soil stability and energy,

nutrient, and water cycling, would be maintained across the landscape, except at localized areas of livestock concentrations and areas impacted by project development. Project development would directly impact and displace vegetative communities in the localized area of the project and cause increased trampling with associated impacts immediately adjacent to projects such as fences and water developments. In the long-term, project development will allow for implementation and maintenance of grazing schedules necessary to foster vegetative health and maintenance.

4.4.1.2 Impacts to Riparian Vegetation

Assessment of Proper Functioning Condition was conducted on 216 miles of streams in the Bully Creek Landscape Area. Of this 216 miles, assessments identified 51 miles of riparian areas in proper functioning condition and 47 miles functioning at risk with an upward trend. Sixty miles of riparian areas were identified as functioning at risk not apparent trend. Current grazing was the sole limitation on seven of the 60 miles, while current grazing plus other factors contributed to another 11 miles of this condition. The remaining miles were limited by factors other than current grazing. There were 34 miles of riparian areas identified as functioning at risk with a downward trend, of which 13 miles identified current grazing as the limiting factor. Fourteen miles of the downward trend areas identified current grazing plus other factors as contributing to not meeting PFC. The remaining seven miles were limited by factors other than current grazing. Of the 24 miles of riparian areas identified as non-functioning, approximately 19 were in some part limited by grazing. Riverine riparian areas are present in 53 of the total 103 pastures within the landscape area. Fifty of these 53 pastures are not currently meeting standard 2 with current grazing management practices being the main factor within 15 of the pastures.

Factors which may limit the attainment of riparian function and the progress of meeting riparian objectives include, but are not limited to, road placement and maintenance, stream flow affected by upstream reservoirs, livestock grazing, upstream or downstream influences from private lands, or juniper encroachment into riparian and upland vegetation communities. Riparian areas in proper functioning condition and functioning at risk with an upward trend would remain functioning with the proposed action. The riparian areas with a functioning at risk not apparent trend and some of those with a downward trend would improve with the proposed grazing changes if current grazing is identified as the sole limiting factor. Where more than current grazing is a factor contributing to the degraded condition of the riparian area, improvement may not be possible with the proposed changes. Many incised stream reaches in non-functioning condition or functioning at risk with a downward trend would continue to degrade as a result of the continuation of hydrologic processes, regardless of the proposed action. These stream reaches would improve in condition once hydraulic processes establish a new floodplain at the entrenched elevation. The time frame for improvement with dissipation of the energy within the stream and rebuilding of a floodplain may be in excess of 20 to 50 years. Some of the non-functioning riparian areas might not have the

potential to improve due to loss of all hydrologic controls, vegetative factors, and /or stream channel characteristics. Implementation of the proposed action would be an opportunity to observe improvement in areas still retaining the potential to attain proper functioning condition.

Construction of Frog Riparian Fence, East Cottonwood Pasture Fence, West Cottonwood Pasture Fence, Kitten Canyon Pasture Fence, an allotment division fence in Rail Canyon Allotment, and a pasture fence in Brian Creek Allotment as well as the realignment of existing fences to create Rocke Riparian Pasture would provide management units where grazing schedules would be consistent with maintenance and improvement of riparian resource values. Reconstruction or maintenance of exclusion fencing at NG Creek Enclosure, Zotto Reservoir, and Pence Spring Reservoir and livestock exclusion fencing at Pole Creek Spring would provide protection for the riparian resources at several specific locations and allow for the recovery of vegetation communities.

Under this Alternative, short-term improvement in forbs and perennial grass species, including Kentucky bluegrass and red top, would occur with limitations set on summer and fall grazing of riparian communities. The establishment and increased dominance of stream bank stabilizing sedges and rushes would occur in the mid-term provided that hot season and unauthorized grazing use did not occur. Over the long-term, dominance of late seral sedges and rushes would occur as extensive root systems bind stream bank soils.

The incidence of browsing on young woody species would be reduced, improving the survival of seedlings and suckers of riparian shrub species and desirable trees including aspens, willows, birch, and cottonwoods. Where potential exists, multi-aged shrub and deciduous tree composition within riparian vegetation communities would result. This would provide structural diversity perpetuating the physical and biotic benefits of long-lived riparian woody species. More of the soil profile would be occupied with roots providing more stabilization to the stream banks.

Coarse above-ground growth provided by herbaceous and woody species would provide increased stream bank and floodplain roughness and reduce the energy within the stream, thus stabilizing stream banks while holding water on site longer and recharging the aquifer. Sediment loads carried by the stream would be allowed time to settle out, building banks and providing seed-beds for further development of riparian species. Aquifer recharge, coupled with stream shading provided primarily by woody species together with overhanging banks, would extend stream flow through the year. As a result of the sponge action of functioning riparian communities, the extremes of high spring flow and downstream flooding would be minimized, while sustained flows during late summer are maintained when groundwater held in riparian communities re-enters the stream channel. Stream channel width to depth ratios would be reduced as a result of greater binding of the soil profile by woody and herbaceous species roots reducing the water surface area subject to solar radiation and subsequently water temperature increase.

Implementation of grazing schedules would have little effect on the dominance of western juniper in vegetation communities. Western juniper establishment and dominance is primarily a result of natural succession in the absence of periodic fire and will occur even in healthy upland and riparian vegetation communities where soils are not saturated. Juniper and sagebrush (woody species not associated with saturated riparian soils) would decline in dominance within wide stream riparian vegetation communities over the long-term as root access to aerated soils is limited when aquifers are recharged and maintained. Proposed management actions to manipulate vegetation communities, including reduction in the dominance of western juniper in riparian communities, would occur in the South Gregory and Lower Pole Creek pastures of Allotment #3 and Juniper Springs, Willow Basin Creek, and Bully Creek pastures of the Willow Basin Allotment. Removal of western juniper trees from riparian communities would enhance stream bank stability and improve the soil-water balance by allowing for soil stabilization through increased dominance of more mesic herbaceous and woody species. Juniper reduction within the upland communities of these pastures would similarly improve the soil-water balance by providing opportunity for maintenance of diverse multi-layered vegetation communities which include scattered western juniper and limit sediment loads delivered to streams to natural levels. Additional projects which limit juniper occurrence in riparian vegetation communities of the Bully Creek geographic area (identified through the life of the plan using the adaptive management process) would similarly affect resource values when implemented.

Any additional vegetation manipulation projects which increase ground cover provided by herbaceous and shrub species would also contribute to development and maintenance of healthy and diverse vegetation communities which would subsequently limit sediment loads delivered to streams to natural levels.

4.4.1.3 Impacts to Special Status Plants

The two special status plant species, ochre-flowered buckwheat and Malheur cryptantha, are located on diatomaceous ash deposits in the subbasin. The two pastures supporting these two species were found deficient for Standards 3 and 5; however, current livestock management practices were not determined to be responsible for the deficiencies. Impacts from BLM's livestock grazing management decisions cause no known impacts to these two species due to the unique soil and topography that comprise their habitat. There has been some recent disturbance from OHV use on the steep, ash soils, but no other impacts have been identified.

There would be no anticipated impacts to the two plant species from proposed changes in grazing practices. Livestock would not utilize the steep slopes where these plants grow under the proposed season of use. No impacts would occur from the proposed seeding treatment, because the habitat supporting the species would not be directly affected and crested wheatgrass seedlings have not become established on this soil type in the past.

4.4.1.4 Impacts to Aspen

Aspen vegetation is located in 20 of the total 109 pastures within the Bully Creek subbasin area. Of the 24 pastures where SRH are not being met and current livestock grazing is determined to be the primary cause, 10 contain aspen vegetation. The proposed grazing systems would have little effect overall on the aspen communities within the Bully Creek subbasin in the short- or long-term. The proposed 3,200-acre prescribed fire project in Willow Basin and Bully Creek pastures of Willow Basin Allotment would allow moderate short- and long-term benefits to aspen regeneration. This large burn acreage in combination with implementing protective techniques for regenerating aspen would provide sufficient protection from big game and livestock for young aspen to grow. In the other 18 aspen pastures, a continuing decline in aspen health would occur until additional projects, such as prescribed fire, could be planned and implemented through the adaptive management process. These projects would similarly benefit resource values when implemented.

4.4.2 Alternative B (Suspended Use)

4.4.2.1 Impacts to Upland Vegetation

Impacts to vegetation are expected to be similar to Alternative A (Proposed Action) with the exception that short-term improvements to vegetative communities may occur at a slightly faster rate in those pastures where livestock are excluded. Fourteen of the 36 upland trend studies not meeting upland objectives would be expected to move towards meeting objectives in 3 years. Impacts as a result of vegetation manipulation projects and project development would be similar to Alternative A, although the timing and sequence of specific development may be somewhat different. Impacts to sagebrush and western juniper communities would be slightly greater under this alternative due to the expected increase in wildfire. Impacts to upland vegetative communities on private land would increase, in some cases to a high degree due to the 17,598 AUM reduction and removal of livestock from 24 pastures in 8 allotments comprising 45 percent of the public rangelands. Some operators would have to substantially increase grazing use on private or leased land for 3 years in order to maintain a viable operation. Impacts resulting from this increased use of private land would have adverse impacts to public land located downstream, most notably hydrologic impacts.

4.4.2.2 Impacts to Riparian Vegetation

Impacts of implementation of Alternative B to riparian vegetation communities would be similar to those identified in Alternative A (Proposed Action). Short-term recovery rates would be greatest along 57 miles of stream currently functioning at risk with a not apparent trend and along 35 miles of stream functioning at risk with a downward trend. Along 21 miles of stream non-functioning, little short-term improvement would be expected, especially where channels are deeply entrenched. The recovery of these non-

functioning riparian reaches would be long-term as stated in the analysis for Alternative A. Adherence to grazing schedules would be similar to Alternative A for pastures where current livestock management was not leading to the failure to meet SRH. Rates of recovery would be similar to Alternative A. Following temporary exclusion of livestock from the 18 pastures identified above, continued recovery of riparian vegetation communities would occur at faster rates than Alternatives A and C.

Temporary removal of livestock from 18 pastures in Bully Creek geographic area in which Standard 2 was not met due to current livestock management practices (Table 1) would result in an improved short-term rate of riparian recovery as compared to Alternative A. Similarly, temporary removal of livestock from an additional 6 pastures in which Standards 1, 3, 4 and/or 5 were not met due to current livestock management practices would result in an improved short-term rate of recovery of riparian vegetation as compared to Alternative A.

Riparian vegetation recovery resulting from proposed projects would be similar to those identified in Alternative A. Site-specific recovery would be different from Alternative A with scheduled livestock exclusion from 18 pastures containing riparian resources. The difference would be a result of project implementation priorities.

4.4.2.3 Impacts to Special Status Plants

Two pastures supporting two special status plant species were found to be deficient for Standards 3 and 5; however, current livestock management practices were not determined to be responsible for the deficiencies. Consequently, 3 years of non-use would not be implemented under this alternative within the habitat of these species, and effects would be the same as described in Alternative A (Proposed Action).

4.4.2.4 Impacts to Aspen

Livestock would be excluded for a minimum of 3 years from 24 pastures, 10 of which contain aspen stands in poor condition caused by livestock grazing practices. In the Willow Basin and Bully Creek pastures, where a 3,200-acre prescribed fire has been proposed, moderate aspen regeneration would occur in the short- and long-term. The other 10 rested pastures with aspen, would not likely show substantial improvement in the short- or long-term since other factors besides livestock grazing practices have been identified as causing the aspen to be in poor condition. In these aspen pastures livestock grazing would continue and the health of aspen likely continue to decline under the new grazing systems until additional projects, such as prescribed fire, could be planned and implemented through the adaptive management process. These projects would benefit resource values when implemented.

4.4.3 Alternative C (No Action)

4.4.3.1 Impacts to Upland Vegetation

Trends and conditions identified in Section 6.0 and Appendix C of the LAMP would be expected to continue under current management strategies. Twenty two of the total 36 upland trend studies meeting objectives would remain stable with favorable climatic conditions. The remaining 14 upland trend studies not meeting upland standards and in a degraded condition, would continue in the same state. Negative impacts to these vegetative communities would continue until adjustments would be made to management practices. Impacts from vegetation manipulation projects would be similar to those in Alternative A (Proposed Action), but reduced as less projects are likely to be implemented. Impacts from project development would be similar to Alternative A but may occur in different locations and at different rates.

4.4.3.2 Impacts to Riparian Vegetation

Forty eight miles of riparian vegetation communities adjacent to perennial or intermittent streams determined to be in proper functioning condition, 49 miles of riparian communities determined to be in functioning at risk with an upward trend, and portions of 57 miles of riparian communities functioning at risk with a trend not apparent would continue as assessed. Thirty five miles of riparian vegetation communities found to be functioning at risk with a downward trend and 21 miles of riparian vegetation communities found to be non-functional where livestock use was identified as a factor limiting attainment of function would also continue as assessed.

Riparian function within stream reaches in 18 pastures not currently managed to maintain or improve riparian values and where Standard 2 was not met due to current livestock management would continue to function at risk or become nonfunctional and would support limited dominance of mesic sedges, rushes, shrubs and trees.

Development of projects would continue to occur with implementation of existing activity plans and authorizations, as needs would be identified. Impacts to riparian vegetation from implementing rangeland improvement projects, including fencing, water development, and vegetation manipulation, would be assessed on a project-specific basis as proposals for development would be received.

4.4.3.3 Impacts to Special Status Plants

Habitat for two special status plant species has not been affected by livestock grazing in the past due to the steep topography and soil type supporting these species. Continuation of current livestock grazing management would not affect the plants.

4.4.3.4 Impacts to Aspen

Under current management, aspen health would continue to decline throughout the subbasin. This decline would occur regardless of elevation, aspect, presence of juniper or current grazing systems. In recent years, three pastures (North Bully Creek, and East and West Crow Creek) were closed for 2 to 3 years to aid aspen regeneration. Elk and deer browsing was estimated at 80 percent of the current year's aspen leader growth in pastures where no livestock were present. The Rail Canyon prescribed fire project was initiated in 1999 to begin comprehensive treatment of aspen, uplands, forest stands and riparian areas in an attempt to stimulate aspen sprouting while reducing wildlife impacts and controlling livestock until aspen regrowth was well- established. Results will not be known for several years, but an integrated approach to this problem is believed to have the best chance for success for aspen regeneration.

4.5 Weeds

4.5.1 Alternative A (Proposed Action)

Because of the immediate threat of several highly invasive exotic weed species, the proposed action calls for continued controlling/eradication of all known County listed type "A" weeds and, subject to funding availability, lower rated County listed type "B" and "C" (see Glossary for county weed list and Appendix A, Table A-5 for weed list) on an annual basis. Control measures that include mechanical, chemical, biological and non-traditional methods, i.e. grazing weeds with sheep and goats, would be considered, in compliance with existing integrated weed management policies and would not be expected to cause adverse impacts to desirable resources. These control methods used in conjunction with other proposed management practices are expected to improve habitat conditions and thus curtail new establishments of County "A" and "B" listed weeds. Additionally, such practices would slow the spread of existing established stands of County "B" and "C" listed noxious weeds and other weedy species, and reduce their further establishment. Benefits will be realized gradually and the full potential may not be realized on a landscape scale during the first 10 years of the LAMP implementation.

4.5.2 Alternative B (Suspended Use)

Impacts of weed management would be similar to those identified in the Proposed Action. Suspended use of livestock alone would have very little effect on the overall weed populations. Without intervention, using herbicide treatment and seeding of desirable, competitive species, noxious perennial and annual weeds would continue to expand in heavily degraded areas. In areas where perennial grasses and shrubs can respond from no grazing pressure, competition from the healthier communities may retard new establishments of invading noxious weeds.

4.5.3 Alternative C (No Action)

Impacts of weed management would be the same as identified under Alternative A (Proposed Action).

4.6 Fire History and Management

4.6.1 Alternative A (Proposed Action)

With the exception of drought years, it is expected that there will be adequate fine fuels to carry wildfire. It is expected that average annual wildfire numbers and acreage would continue to fluctuate as in the past.

Under the Proposed Action, prescribed fires would be conducted in areas of the landscape where vegetation communities are not meeting resource objectives for diversity, composition, structure, and wildlife habitat needs. The use of prescribed fire would increase over current levels conducted in areas of the landscape where vegetation communities are not meeting resource objectives for diversity, structure and wildlife habitat needs. Prescribed fire would reduce the amount of burnable fine fuels which, in turn, may slightly reduce the number of large wildfires and average annual acres burned.

4.6.2 Alternative B (Suspended Use)

The amount of fine fuels available to carry wildfire would increase in the short-term due to no grazing on 41 percent (Table 1) of the landscape. This in turn is expected to increase the number of large wildfires and the average annual acres burned. The impacts to resources from prescribed burning under this alternative would be the similar to those described for the Proposed Action.

4.6.3 Alternative C (No Action)

Under current management strategies, additional prescribed burns have not been proposed, although this still remains an option. The Rail Canyon Prescribed Fire, initiated in 1999, would be completed in the next one to two years. The impacts from any prescribed burns would be the same as described for the Proposed Action.

4.7 Hydrology and Water Quality

4.7.1 Alternative A (Proposed Action)

Implementation of the Proposed Action would improve water quality through increased

health of uplands and riparian areas. Grazing management strategies, including construction of pasture division fences to create riparian pastures, developing water sources outside of riparian corridors, herding livestock, and utilization limits, particularly in riparian zones, would increase vegetation and soil stability which contribute directly to water quality. Proposed grazing schedule changes limiting grazing in riparian areas during the hot season and late in the fall season (LAMP, Appendix C) would increase woody vegetation, creating better shade which would lower water temperatures. Limited and early season use of herbaceous riparian vegetation would allow for regrowth of the vegetation by mid-summer, stabilizing streambanks and increasing the filtering of sediments. Limited use of riparian areas would also decrease coliform input and erosion due to hoof action. With the Proposed Action, water quality would continue to improve towards DRFCs in those areas meeting standards. Where water quality is limited, the Proposed Action would allow progress towards meeting the standards and DRFCs.

The hydrologic function and water quality of streams is expected to improve over current levels in both the short- and long-term. Short-term negative impacts to surface water quality would result from projects outlined in the LAMP. Infiltration rates are likely to decline immediately following prescribed burns, seedings, and brush controls causing an increase in overland flows. Prior to vegetation regrowth, areas subjected to high intensity storms would contribute to flashy runoff, and erosion and sediment transport would be increased. Fence projects would contribute to short-term soil instability that would negatively impact water quality. Fences aimed at lessening grazing impacts to riparian areas would increase riparian vegetation communities positively influencing water quality and hydrology. Over the long-term, vegetation treatments would increase desirable herbaceous, shrub, and tree species which would contribute to landscape stability and improve water quality.

Major access roads which cross through or adjacent to streams would continue to negatively impact hydrologic function and water quality. Crossings which are not hardened, repeated crossing points, and high frequency access points would cause an increase in localized disturbances and downstream sediments. These impacts are expected to continue under the Proposed Action.

4.7.2 Alternative B (Suspended Use)

Implementation of Alternative B would have similar impacts as the Proposed Action. In areas where grazing is suspended for 3 years, water quality would be accelerated. The removal of livestock would eliminate fecal coliform inputs for 3 years. Erosion would decrease due to the lack of soil disturbances, creating less sediment loading in streams over the short-term. Grazing impacts on riparian vegetation would be eliminated over the short-term allowing the vegetation to positively impact stream temperatures and provide bank stability. Alternative B would continue to improve water quality towards DRFCs in those areas meeting SRH. Where water quality is limited, the Proposed Action would allow progress towards meeting the SRH and DRFCs. Short-term and long-term impacts

to water quality as a result of projects would be similar to those in the Proposed Action.

4.7.3 Alternative C (No Action)

The impacts to hydrology and water quality would be similar to those described for Alternative A and solutions to resource problems would occur over a longer period of time. The condition of streams would continue to degrade in areas not meeting SRH. With continued degradation of the streams, the stream reaches with poor water quality would have the potential to negatively impact those stream reaches which are currently meeting SRH. Effects from upstream pollutants, excessive sediment, and streambank instability would influence the functionality of a stream. Erosion and stream instability would also contribute to negative upstream impacts.

Under this alternative, the level of prescribed fire may be less and result in more frequent and widespread wildland fires. This scenario has the potential to impact more acreage, causing increases in overland flows, soil erosion, and direct and indirect impacts to water resources and water quality.

Current grazing management has been based upon existing AMPs where riparian objectives were established for only 12 of the 65 pastures defined as riparian following FY1998 assessments. Consequently, the current conditions of riparian habitats, and the hydrologic function of streams and water quality has degraded in many areas accessible to livestock.

4.8 Fisheries, Wildlife and Special Status Animals

4.8.1 Fisheries

4.8.1.1 Alternative A (Proposed Action)

Short-term aquatic habitat conditions along all streams would show slight to moderate improvement due to changes in grazing systems and projects that reduced livestock impacts to riparian areas. Early season livestock use and limited hot season grazing would allow riparian vegetation to increase. Most fish habitat improvement would be due to increased riparian vegetation shading along streams and the stabilization of streambanks. Slight water quality improvement would occur as increased upland vegetation and litter reduced silt transport from upland areas. Habitat for hatchery rainbow trout would improve in three reservoirs where Livestock were excluded due to reduced siltation and fecal material, and increased bank vegetation.

Long-term improvements in fish habitat would be moderate, as woody riparian vegetation grew taller and provided more shade than currently exists. Better livestock management

in upland habitat would provide additional benefits. Increased herbaceous vegetation and litter would decrease silt input to streams.

4.8.1.2 Alternative B (Suspended Use)

Livestock grazing would be suspended for 3 years in 18 pastures with riparian/aquatic habitat, many of which have fish-bearing streams. Existing riparian shrubs would grow taller and thicker at a faster rate than under the Proposed Action and the additional shade may lower water temperatures somewhat more effectively. Additional root growth from woody and herbaceous vegetation would capture more silt and, therefore slightly improve water quality. As Livestock would return to these pastures, the new grazing systems would allow aquatic habitat improvement to occur at a faster pace than the Proposed Action due to the improved health of riparian plants. Some rested pastures without fish habitat are upstream of fish-bearing segments. Resting these upstream pastures would slightly improve upland vegetation, reducing silt delivery to riparian areas, and thereby improving fish habitat downstream. Slight improvement to fish habitat would occur in the short and long-term due to increased growth of upland and riparian vegetation.

Fisheries would be at risk if silt and ash generated by fires in the watershed entered the inhabited streams. There would be a slight increase in the risk of fire due to additional fine fuels accumulating during 3 years of suspended use. However, most rested pastures currently are deficient in grasses and forbs, and the rest period would only raise the fire risk to that of proper functioning pastures. Should a pasture within or upstream of a fish bearing segment burn, there would be a short-term decline in fish habitat conditions due to silt and ash entering the system.

Long-term fish habitat conditions would improve faster due to a faster rate of improvement in riparian vegetation in the 18 rested pastures. Slightly improved conditions would occur in stream segments downstream of rested pastures due to better functioning conditions upstream. Additional fish habitat improvement would occur due to secondary improvements in upland habitat as additional accumulation of grasses and forbs reduced erosion. This additional accumulation of grasses and forbs could also lead to an increase in the incidence of fire decreasing juniper dominance. The eventual regrowth of grasses and forbs following these fires could reduce soil erosion into streams and improve the habitat quality for fish.

4.8.1.3 Alternative C (No Action)

Fisheries habitat would slightly improve in those stream segments currently at proper functioning condition or in upward trend. Current riparian conditions are not satisfactory, and trends are not upward in at least one stream segment composed of 33 pastures. Unsatisfactory fish habitat conditions would persist in these stream segments in the short and long-term.

4.8.2 Wildlife

4.8.2.1 Alternative A (Proposed Action)

Effects to wildlife habitat would occur from changes in grazing seasons of use, projects and secondary factors resulting in changes in vegetation. Because of different habitat needs of various wildlife species, proposed management actions and projects would benefit some species, and be neutral or detrimental to others. Important wildlife habitats were identified in the LAMP and included lower elevation winter habitat critical for mule deer and pronghorn, sagebrush-steppe and aspen/juniper woodlands used by breeding neotropical migratory birds, and riparian areas

Proposed grazing systems would slightly improving habitat conditions in the short-term by increasing annual grasses and forb understory in pastures important to wintering big game species. Little long-term improvement would occur in these annual rangelands from livestock management practices. Changes in grazing seasons would occur in several pastures where mountain shrub communities were impacted by livestock. Reduced grazing pressure during critical seasons would allow increased plant growth and seedling survival, benefitting most wildlife species. Improved livestock management in riparian areas would result in moderate wildlife habitat improvement in the short- and long-terms due to increased woody vegetation and longer availability of surface water in some drainages.

Proposed projects in 13 pastures designed to rehabilitate portions of old crested wheatgrass seedings and annual-dominated rangelands would moderately improve herbaceous understory while leaving sufficient sagebrush for wildlife. Proposed fencing would not affect wildlife habitat since Bureau fencing standards would be followed. Other construction projects would have little effect on wildlife habitat at the time of construction. Where new water projects concentrate livestock in areas not previously grazed, a moderate loss of habitat for song birds and some small mammals would occur. Mule deer and pronghorn would be able to travel through impacted areas and would slightly benefit for additional water sources.

Proposed projects designed to burn aspen or juniper communities in four pastures would decrease habitat needed by mule deer, elk and several songbird species for several years due to the loss of structure and cover. Within the short-term there would be recovery of the understory sufficient to provide habitat for several wildlife species adapted to grassland habitat, and increased forage preferred by elk, mule deer, and pronghorn. Different wildlife species would begin using burned areas as shrubs invaded in the mid- to long-term. Over the long-term, prescribed fires would improve wildlife habitat by providing a mosaic of habitat conditions for a diversity of species.

4.8.2.2 Alternative B (Suspended Use)

Livestock would be removed from 12 pastures deficient in grasses or forbs used by wintering pronghorn and mule deer and breeding neotropical migratory birds. Slight to moderate short-term improvement in habitat would occur as the vigor of established plants and seed production increased. Better nutrition and additional hiding cover would slightly increase reproductive success of most wildlife species. Increased seedlings establishment would result in slight, long-term habitat improvements that would be perpetuated by new grazing systems.

Livestock use would be suspended in 18 pastures with riparian vegetation. The faster growth of woody vegetation, more residual cover and reduced disturbance would increase big game and songbird use of this community in the short-term. Slight improvement would continue into the long-term. In two pastures with poor quality bitterbrush or other mountain shrub communities, suspended livestock grazing would increase plant vigor and establishment of seedlings. In the long-term, the faster initial recovery rate would be perpetuated by improved grazing schedules in subsequent years. In two other rested pastures, the aspen community currently affected by livestock would not improve due to a high elk population. Elk would likely increase their aspen consumption proportionate to the reduction in livestock use during the 3 years of non-use.

A slight increase in wildfire potential would occur due to the increased amount of fine fuel in all 24 rested pastures. However, the risk of fire would be similar to that of pastures currently meeting grazing standards. Fires in the eight pastures with juniper would decrease the habitat for songbirds species requiring more structure while improving conditions for those preferring grasslands. In the long-term, sagebrush would reestablish in burned areas and provide additional habitat for other songbird species. Removing juniper vegetation in burned areas would eliminate some hiding and thermal cover for deer and elk in the short-term, but would greatly improve forage conditions within two growing seasons. Localized, short and long-term habitat improvement is expected from 3 years of livestock suspension in eight pastures with juniper.

Reduced disturbance to wildlife from livestock and ranch management activities would occur in all 24 rested pastures. This would result in a slight increase in reproductive success of songbirds due to reduced trampling, and the increased residual cover would reduce predation. Other effects from the grazing systems established following livestock suspension and the completion of proposed projects would be similar to those in the Proposed Action in the short and long-term.

4.8.2.3 Alternative C (No Action)

Continuation of current management strategies would allow unacceptable habitat conditions to be perpetuated in 57 pastures in I and M allotments not meeting the minimum standards necessary for healthy fisheries, wildlife and native plant species

(LAMP Appendix C). Currently only 15 pastures have wildlife objectives identified in AMPs. Unsatisfactory conditions in 13 low elevation pastures with decadent crested wheatgrass seedings or locked-in annual rangeland important to wintering big game would be perpetuated. Mountain shrub communities important to wildlife would remain in unsatisfactory condition where the cause was the current grazing season of use. Riparian areas currently not properly functioning or in upward trend would not provide potential habitat for wildlife. Juniper coverage in pastures with proposed prescribed fires would not be burned allowing young junipers to encroach into sagebrush, aspen and riparian communities, adversely affecting wildlife species intolerant of increased structure.

4.8.3 Special Status Animals

4.8.3.1 Alternative A (Proposed Action)

Special status species include riparian/aquatic (Northern bald eagle, Columbia spotted frog, and redband trout) and upland (Western sage grouse and Northern goshawk) species. Effects on special status wildlife and fish dependent on riparian/aquatic habitat would be similar to the effects on fisheries and wildlife in both the short- and long-term. The proposed grazing systems and projects would improve riparian and upland vegetation, increasing the quality of water running off the watershed and stability of stream flows. Improved water quality and quantities would provide slight to moderate improvements in habitat for spotted frogs, redband trout and bald eagles in the short-term and moderate improvement in the long-term.

Sage grouse on leks would benefit moderately where livestock are not allowed in pastures until after the courtship period. Sage grouse nesting habitat would benefit moderately by the new grazing systems that maintained 7-9 inches of herbaceous cover within 2 miles of leks. Proposed prescribed fires would remove encroaching juniper trees from nesting and brood rearing habitat in three treated pastures providing slight short-term and moderate long-term benefits within these pastures. Slight to no adverse impacts would occur to sage grouse winter habitat where sagebrush was killed in old seedings or where annual rangeland was reseeded. These projects would affect only a small percentage of available sagebrush habitat.

4.8.3.2 Alternative B (Suspended Use)

Effects of Alternative B upon habitat important to upland and riparian special status species generally would be similar to other wildlife. A partial exception would be effects on sage grouse. Three years of non-use in 6 rested pastures within 2 miles of sage grouse leks would rapidly increase the vigor of existing grasses and forbs improving the protection of grouse nests from predation. In 3 pastures with proposed prescribed fire projects and 3 other pastures without proposed burning the 3 years of non-use would

increase the fire potential. Fires in these six pastures would reduce juniper encroachment and provide slight to moderate habitat improvement for sage grouse. Improved habitat conditions for Western sage grouse would increase reproductive success and slightly reduce the need for listing this species under the Endangered Species Act (ESA).

4.8.3.3 Alternative C (No Action)

Implementation of the No Action Alternative would maintain current habitat conditions for special status species. Species dependent on riparian and aquatic habitats would continue to benefit from improvements in the 12 pastures with riparian objectives and in the other pastures with riparian vegetation in functioning condition or in upward trend. Riparian areas in unsatisfactory condition or in a downward trend would continue to not meet special status species needs. Sage grouse nesting and brood rearing habitat would continue to deteriorate in all pastures with juniper. Grazing systems in pastures with sage grouse leks impacted by early spring grazing and nesting habitat with insufficient herbaceous understory would continue to negatively impact grouse habitat.

4.9 Rangeland/Grazing Use

4.9.1 Alternative A (Proposed Action)

The Proposed Action recommends changes to existing grazing schedules which would be implemented beginning in FY2000. This program would continue to provide for a sustained level of livestock grazing consistent with other resource objectives and public land use allocations. These grazing schedules, which incorporate season-of-use modifications, utilization levels, duration of use, and distribution, all address specific resource concerns, including on-going recreation activities, special management areas, and access. The focus of the grazing program would be to improve or maintain resource conditions related to watershed functions in the uplands and riparian areas, ecological processes, and for native, threatened and endangered, and locally important species.

There would be no immediate reductions in active grazing use, although more stringent utilization limits may in some cases require early removal of livestock from public rangelands. There would be short-term negative impacts to some permittees from implementing prescribed fire which requires, at a minimum, two growing seasons of rest to ensure vegetation recovery. In the long-term, permittees would benefit due to increased and improved forage conditions.

Permittees would see slight increases in operation and labor costs due to the increased herding requirements under the Proposed Action.

4.9.2 Alternative B (Suspended Use)

Under this alternative, grazing use would decrease by 17,598 AUMs representing 45 percent of the landscape area. Loss of AUMs are shown by allotment in Table 1. It is expected that some current grazing operations would not be viable under this alternative. Impacts to operators would depend on the rate of recovery of the vegetation communities within the pasture(s) as they relate to meeting SRH or LAMP objectives and the amount of suspended AUMs. Short-term and long-term impacts due to wildland and prescribed fire would be similar to the Proposed Action, but would slightly increase due to the expected increase in number and size of wildfire.

4.9.3 Alternative C (No Action)

There would be no immediate impact to permittees in the short-term. In the long-term, adjustments would be made to individual permits and grazing schedules in order to meet resource objectives and SRH. These adjustments could include reductions in active AUMs or changes in season of use. Prescribed fire may not be as aggressive as under the Proposed Action and permittees may not experience as many short-term suspensions of grazing use in burned areas. Although short-term direct impacts to continuous livestock grazing may be minimal, long-term impacts would be realized due to continued declines in forage conditions.

4.10 Recreation and Visual Resources

4.10.1 Alternative A (Proposed Action)

The development of 19 miles of livestock fences would have an insignificant impact on dispersed recreation activities such as hunting, hiking and wildlife observation. The additional fence placement in areas open to off-highway vehicle use would result in an insignificant hindrance to recreation use.

Various prescribed burns or other vegetation manipulation projects would cause short-term site-specific decreases in certain dispersed recreation activities such as big game hunting. With prescribed burns occurring throughout much of the life of the plan, such site-specific impacts would be long-term, but with individual burn sites affected only short-term. Improved riparian and upland native habitats, and increased wildlife forage would slightly enhance hunting and wildlife viewing opportunities in the long-term. The loss of habitat biodiversity caused by newly established seedings would create site-specific short- and long-term adverse impacts on some wildlife viewing and hunting opportunities, but would be insignificant within the landscape area as a whole. The limited number of management actions improving aspen health and recovery would result in a long-term degradation in the level of quality recreation experiences for some activities (e.g., hunting, wildlife viewing, and dispersed camping) which rely on such settings.

Most management actions would meet visual resource management (VRM) objectives within either VRM III or IV classified areas. Cumulatively, construction of new rangeland facilities would result in relatively small visual changes to the landscape.

Fire blackened areas would have a short-term, temporary adverse visual impact to affected settings until desired vegetation is re-established. New areas of crested wheatgrass seedings and brush beating actions would meet only VRM class IV management objectives. Tree stumps remaining from juniper cutting would create a long-term change in visual setting, yet meet VRM Class IV objectives. Juniper stumps would meet VRM Class III objectives where juniper cutting or other woody vegetation projects are kept small in size, dead vegetation is substantially eliminated on-site, where projects are spatially separated from each other, and located in a mosaic pattern in relation to topography and other natural features. Visual quality would be enhanced by other actions which improve natural resource and habitat conditions.

4.10.2 Alternative B (Suspended Use)

Impacts to dispersed recreation use opportunities would be similar to the Proposed Action. In pastures where livestock use is suspended, the quality of a recreation experience would be enhanced for recreationists who prefer to avoid livestock. Within riparian areas and aspen groves with suspended livestock use, certain recreation opportunities (e.g., hunting, wildlife viewing, and camping) would be enhanced at a faster rate.

Impacts to visual resources would be as described under the Proposed Action. Additionally, suspended livestock use would allow for accelerated enhancement of scenic quality in affected areas; particularly within riparian corridors and aspen groves. Overall, visual enhancements within the landscape area would occur at a more accelerated rate under this alternative.

4.10.3 Alternative C (No Use)

Dispersed recreation uses and opportunities would remain available, but limited compared to Alternatives A and B. Under this alternative, enhancement of recreation uses and opportunities would take the greatest period of time, if accomplished at all. Where livestock uses are presently adversely affecting recreation, improvement would be delayed until individual allotment management plans are updated. Any enhancement of recreation opportunities would occur in a more sporadic manner than under Alternatives A and B with no continuity or connectiveness within the landscape area. Wherever dispersed recreation-dependent resource conditions deteriorated, there would be a gradual short- to mid- term decline in the quality of dispersed recreation uses and opportunities.

Under this alternative, the enhancement of visual quality would occur the slowest rate compared to Alternatives A and B. Improvement of visual quality at visually sensitive locations, such as riparian areas, would occur sporadically and would take longer. The extent of vegetative manipulation and prescribed fire would be the least under this alternative with associated visual impacts from these actions being less evident through time.

4.11 Special Management Areas - WILDERNESS STUDY AREAS, ACEC/RNAs, WILD AND SCENIC RIVERS

4.11.1 Alternative A (Proposed Action)

The Proposed Action is not expected to have any additional impacts to the Beaver Dam Creek WSA or the two proposed ACEC/RNAs beyond those under current management strategies. If the WSA is designated, the primary and secondary wilderness values would be preserved and protected (see Section VI of the LAMP). Currently, four grazing allotments lie within the WSA; livestock grazing would be allowed to continue. Maintenance of existing rangeland improvement projects would still occur. At this time, two additional fences have been proposed within the WSA. The Proposed Action would continue to improve habitat conditions for wildlife species.

No impacts would be anticipated to two ACEC/RNAs proposed for designation in the Draft SEORMP. Proposed projects in the area would be evaluated for impacts to relevant and important values and would be permitted where those values would be maintained or enhanced. The grazing system proposed for these pastures would continue to maintain the excellent vegetative conditions found in the area.

4.11.2 Alternative B (Suspended Use)

For the Beaver Dam WSA and South Fork Indian Creek study stream, the impacts and management requirements would be the same as described under Alternative A (Proposed Action). The analysis of the two ACEC/RNAs proposed for designation in the Draft SEORMP would also be the same as Alternative A (Proposed Action). No reduction in grazing use for 3 years would occur in these pastures because both pastures met standards for rangeland health.

4.11.3 Alternative C (No Action)

For the Beaver Dam WSA and South Fork Indian Creek study stream, the impacts and management requirements would be the same as described under the Proposed Action. The analysis of the two ACEC/RNAs proposed for designation in the Draft SEORMP would also be the same as Alternative A (Proposed Action).

4.12 Socio-Economic Values

4.12.1 Alternative A (Proposed Action)

Under the Proposed Action, there would be little to no expected change in the socio-economic values within the landscape area. All land use activities would occur as in the past. The major impact of this alternative would be changes in grazing schedules in pastures where grazing was determined to be the primary cause for not meeting SRH or other resources values of concern. This alternative could result in small decreases in local economic activity, employment, and income generated by BLM managed resources. Minor impacts of short-term duration may affect recreational activities, wildlife and livestock grazing operations during periods of prescribed burns, or rangeland rehabilitation projects. This alternative is not expected to adversely impact recreational activities or visual resource values.

4.12.2 Alternative B (Suspended Use)

Under this alternative, the expected economic impact would be substantial to those permittees affected by the suspension of use in all pastures where SRH were not being met, and current livestock grazing was determined to be the primary cause. Livestock operators would be required to run fewer numbers on public land or to move livestock to other pastures or private land once utilization levels or the pasture objectives have been met. The suspension of use would affect 45 percent of the landscape area and 12 operators. The resumption of livestock grazing in those pastures would only be permitted where there was a reasonable expectation that grazing could occur without setbacks to the recovery of the ecosystem.

Under this alternative, some livestock operators could go out of business. Recreational use may increase in those pastures where livestock grazing has been removed and the habitat improves the hunting, fishing and other recreational opportunities. Visual resource values are also expected to improve in areas where habitat conditions are currently not functioning properly.

Where prescribed burns have been proposed, the short-term impacts to visual resources due to the blackened nature of the landscape would be minimal. Prescribed fire would be conducted to minimize the impacts to all resources in both the short- and long-term, and appropriate mitigation measures would be taken to protect resources while achieving the desired goals and objectives of the burn.

4.12.3 Alternative C (No Action)

Under this alternative, there would be little to no change in the socio-economic values within the landscape area. Long-term impacts to the livestock industry would occur as a

result of the steady downward trend of upland and riparian vegetation. Also, increasing juniper may result in forage losses for livestock and a possible reduction in livestock numbers and grazing duration. This habitat decline would also have a negative effect on the recreational and visual resource values of the area. The impacts from prescribed burns would be the same as Alternative A.

4.13 Cultural Resources

4.13.1 Alternative A (Proposed Action)

Rock art, rock shelters and structures, habitation sites around springs, small camps at stream-side meadows and on alluvial deposits, quarries, transportation corridors, and the remains of homesteads, stage and telegraph stations comprise the types of pre-historic and historic cultural sites found scattered across the landscape area.

The management proposed for riparian areas to improve water quality and aquatic habitat while reducing soil erosion would benefit cultural resources. Establishing riparian buffer zones and restricting livestock grazing along streams would also maintain cultural site conditions. Livestock congregation and trampling around streambanks and springs has the potential to adversely impact cultural resources; however, the Proposed Action addresses this concern by improved grazing systems, changes in livestock distribution by constructing pasture division fences combined with riding, and in spring protection and building alternate water sources.

Prescribed burns and wildland fires of low intensity would have little to no effect on prehistoric lithic scatter sites, unless heavy equipment is used to blade fire lines. Conversely, high intensity fires can adversely effect these sites when extreme heat damages toolstone and debitage as well as historic buildings that might be present.

Cultural Resource surveys would be conducted to locate any unknown resources, and potential impacts would be mitigated by avoidance, prior to surface disturbance.

4.13.2 Alternative B (Suspended Use)

The impacts from this alternative and mitigation measures are expected to be similar as for the Proposed Action. There may be a temporary reduction in impacts to cultural resources from livestock grazing and congregation in those areas where use is suspended. There would be less impacts to cultural resources because of the increased vegetation growth and cover, which would decrease the visibility of prehistoric and historic sites. Increasing vegetation cover would also benefit cultural resources by decreasing the effects of soil and wind erosion and other site deformation processes.

Prescribed burns and wildland fires of low intensity would have little to no effect on prehistoric lithic scatter sites, unless heavy equipment is used to blade fire lines. Conversely, high intensity fires can adversely effect these sites when extreme heat damages toolstone and debitage as well as historic buildings that might be present.

As with the Proposed Action, prior to project construction, surveys for cultural resources would be conducted to locate any unknown resources and potential impacts would be mitigated for by avoidance.

4.13.3 Alternative C (No Action)

The impacts to cultural resources under this alternative would continue as at present. As with the Proposed Action, prior to project construction, surveys for cultural resources would be conducted to locate any unknown resources and potential impacts would be mitigated for by avoidance.

4.14 Paleontology

4.14.1 Alternative A (Proposed Action)

No systematic paleontological inventories have been conducted within the Bully Creek Landscape Area for fossil flora and fauna. Prior to any project construction, surveys for fossil resources would be conducted to locate any unknown resources and potential impacts would be mitigated for.

4.14.2 Alternative B (Suspended Use)

Same as Alternative A (Proposed Action).

4.14.3 Alternative C (No Action)

Same as Alternative A (Proposed Action).

4.15 Access

4.15.1 Alternative A (Proposed Action)

The acquisition of non-exclusive easements for those portions of 553, Gregory, Pole Creek and Spring Roads which have been identified, would afford BLM and its licensees

and permittees access to the public land served by these roads. This would ensure adequate administrative access for the effective administration of the land.

The acquisition of exclusive easements on these road segments would allow the public to use them. However, the public may not be able to legally reach these segments because BLM holds only non-exclusive easements on portions of roads in the LAMP area.

If one or more of these roads is claimed as a public road by Malheur County through the assertion of rights under Revised Statute 2477, or by some other means, full and free access would be enjoyed by members of the public. BLM has no control over the County's decision to make claims as to the public nature of roads within its boundaries. However, the likelihood of the occurrence of such claims should be a factor in BLM's decision as to whether to acquire a particular access easement.

4.15.2 Alternative B (Suspended Use)

Same as Alternative A (Proposed Action).

4.15.3 Alternative C (No Action)

Same as Alternative A (Proposed Action).

4.16 Cumulative Impacts

4.16.1 Alternative A (Proposed Action)

During data analysis for the landscape area, the effects of historic and current uses were assessed and taken into consideration in developing management recommendations which would lead to reasonable time frames for habitat improvements. The management prescriptions for the LAMP are consistent with the intent and direction described in the Draft SEORMP/EIS, which is designed to enhance natural values and preserve options for future management.

The Proposed Action forecasts the need to engage various activities during implementation of the LAMP. Because the exact location, timing and duration of future (beyond FY1999) activities is unknown at this time, the need to implement any activities would be assessed to ensure they are within the scope of the LAMP, and do not exceed thresholds (cumulative impacts) for disturbances as described in the Draft SEORMP/EIS (USDI/BLM 1998b). Activities would be prioritized based on the analysis completed for the Subbasin Review (USDI/BLM 1998a), as amended (considering current data and management direction). This would be done through the Administrative Determination process, which evaluates the requirement for additional environmental analysis.

Under the Proposed Action, livestock grazing would continue at current levels; however, grazing schedules, utilization rates, duration of use, and other actions such as riding and fencing to improve livestock distribution would move resources towards meeting the standards for rangeland health and desired range of future conditions. There are no proposals to construct recreation facilities or new roads; it is expected that maintenance of existing projects (reservoirs, cattleguards, fences, water developments, roads, etc.) would continue as in the past without causing any additional impacts to the landscape area. The use of prescribed fire would increase over current levels conducted in areas of the landscape where vegetation communities are not meeting resource objectives for diversity, structure and wildlife habitat needs. Future minerals exploration and development is expected to remain unchanged over past and present levels. Wildlife populations are expected to rise over current numbers, corresponding with habitat improvement. The effects of increasing numbers of big game may be positive (in terms of recreation opportunities) and negative (contributing to vegetation, soil, water quality degradation). Recreation activities (hunting, fishing, sightseeing) are expected to increase over past and present levels.

Private land adjoining public land within the landscape area are currently being grazed or are under agricultural production (alfalfa, wheat). Livestock grazing (feeding) occurs on private land during the winter, and permittees rely on public land for forage during the spring, summer and fall. There is no change expected in the future under this alternative. No other developments or uses are anticipated.

4.16.2 Alternative B (Suspended Use)

If livestock use is suspended, this would represent a change in past and present grazing activities within the landscape area. It would be difficult to assess the magnitude of future impacts; with a 41 percent reduction in livestock AUMs occurring in 8 of the 12 I and M allotments, this may have an impact on the local and county economy. Although livestock grazing would still be permitted in certain pastures, and grazing may be resumed in those suspended from use once resource conditions begin to improve, this may potentially put as many as 12 operators out of business.

Resource conditions are expected to show improvement in the short-term. This would result in an overall improvement of soils, vegetation, water quality, and dependent wildlife species. Increases in wildlife populations may result in more hunting opportunities, and may cause additional pressure on resources (particularly riparian/wetland areas), both from big game and the public.

4.16.3 Alternative C (No Action)

As with the Proposed Action, management prescriptions under this alternative would be consistent with the intent and direction described in the Draft SEORMP/EIS, which is designed to enhance natural values and preserve options for future management. Under

current management practices, livestock grazing has been identified as the cause of resource problems in 8 of the 12 I and M allotments (or 45 percent of grazed public land in the landscape area). Although this is an improvement over historic management, taking appropriate action to implement changes within these 8 allotments is required by FY2000. The likelihood that those grazing schedules developed for the Proposed Action would be adopted under this alternative is unknown. Those schedules, in part, depended on taking a landscape look at all allotments, including private land. Permittees may or may not be willing to incorporate other options (i.e., grazing private land with public land, running livestock in common with other permittees, using other pastures in different allotments) into their current grazing operations. This alternative keeps alive the piecemeal approach to resource management, and does not adequately address cumulative impacts to all actions.

There are no changes expected for minerals exploration and development, recreation, and access needs. Prescribed fire may not be as aggressive as with the Proposed Action, since burning often takes coordination among adjoining landowners to achieve effective results. Wildlife populations are expected to increase, although big game may not be as widespread as under Alternatives A and B. There are no short-term impacts expected to the local economy; long-term impacts may be static or even down due to an inability to coordinate habitat recovery actions across the landscape area.

4.17 Unavoidable Adverse Effects

Unavoidable adverse impacts are those residual impacts that would likely remain after mitigation. The effects from proposed project implementation would be similar for all 3 alternatives since the same projects would be constructed in all 3 alternatives. The time in which the effects would occur is the only difference between the 3 alternatives. If Alternative A were approved, project work could begin as soon as the fall of 1999 and proceed annually based on the availability of funding. Alternative B would evaluate the resource needs after a minimum of 3 years, so proposed project work would not occur until the fall of 2002. Alternative C would implement project work at a slower rate annually and take a longer time to complete the proposed project list. Unavoidable adverse impacts would include:

- 1) Localized trampling of soil around newly developed water sources.
- 2) Localized wildlife mortality associated with collisions or entanglement in 19 miles of new fence. Fence construction would follow BLM guidelines designed to facilitate the movement of wildlife through fencing but some mortality would still occur.
- 3) Erosion from climatic events following planned prescribed burns.

4) Many incised stream reaches currently in nonfunctional condition or functioning at risk with a downward trend would continue to downcut to a hard layer as a result of the continuation of hydrologic processes, regardless of the alternative selected. Correspondingly, those upland and riparian pastures that are currently nonfunctional with a downward trend risk passing the threshold where they can no longer be returned to a productive state.

4.18 Relationship of Short-Term Uses and Long-Term Productivity

The balance (trade-offs) between short-term uses and long term productivity is discussed below for each Alternative.

4.18.1 Alternative A (Proposed Action)

The dominant land use throughout the landscape area is livestock grazing, which occurs on all but 2,200 of the 269,000-acre public land base. The recommendations and monitoring as described in the LAMP are designed to achieve the identified goals and objectives to improve or maintain ecosystem function, ensuring the landscape area moves towards the desired range of future conditions. Implementing the LAMP would also comply with SRH requirements.

In the short-term (within 10 years), the proposed action would generally reduce dominance by woody species and increase mosaics of diverse structures of multiple-aged shrubs, forbs, and perennial grasses in the upland communities with the use of prescribed fire. In riparian areas, the dominance of woody species would be increased creating a diverse structures of multiple-aged shrubs, forbs, and perennial grasses. This would result in greater productivity, and improved natural functions and watershed stability in both vegetation communities. Shrub reintroduction into burned sites would maintain diversity at a moderate scale, especially within habitat of sagebrush-dependent wildlife species. The objectives of maintaining or improving ecosystem function so that resource values would move towards DRFC would continue at a slower rate than Alternatives B but faster than Alternative C.

In the long-term (20 years plus), vigor and health of vegetation communities which includes maintenance of soil stability and energy, nutrient, and water cycling, would be improved across the landscape. Water quality, vegetation, soils and dependent fish and wildlife species would all benefit from the proposed action.

4.18.2 Alternative B (Suspended Use)

Under this alternative, the expected economic impact would be substantial to those 12 permittees affected by the suspension of use in 24 pastures where SRH were not being

met, and current livestock grazing was determined to be the primary cause. Livestock operators would be required to run fewer numbers on public land or to move livestock to other pastures or private land once utilization levels or the pasture objectives have been met. The suspension of use would affect 45 percent of the landscape area (266,579 acres) and 41 percent (120,371) of the AUMs available to be leased. Some of the 12 livestock operators could go out of business. Concentrating livestock on private lands could heighten the impact to resources, including riparian resources, which in turn would affect adjoining land. The resumption of livestock grazing in those pastures would only be permitted where there was a reasonable expectation that grazing could occur without setbacks to the recovery of the ecosystem. Proposed grazing schedules developed for Alternative A would likely be used with this Alternative.

In the short-term (within 10 years), Alternative B would have the same positive impacts to the vegetation communities as Alternative A but occur at a faster rate. In the upland communities, there would generally be a reduction in the dominance of woody species and increase mosaics of diverse structures of multiple-aged shrubs, forbs, and perennial grasses with the increased use of prescribed fire. In riparian areas, the dominance of woody species would be increased creating a diverse structures of multiple-aged shrubs, forbs, and perennial grasses. This would result in greater productivity, and improved natural functions and watershed stability in both vegetation communities. Shrub reintroduction into burned sites would maintain diversity at a moderate scale, especially within habitat of sagebrush-dependent wildlife species. The objectives of maintaining or improving ecosystem function so that resource values would move towards DRFC would continue at the fastest rate of the 3 Alternatives.

Recreational use may increase in those pastures where livestock grazing has been removed and the habitat improves for hunting, fishing and other recreational opportunities. Visual resource values are also expected to improve in areas where habitat conditions are currently not functioning properly. Where prescribed burns have been proposed, the short-term impacts to visual resources due to the blackened nature of the landscape would be minimal. Prescribed fire would be conducted to minimize the impacts to all resources in both the short- and long-term, and appropriate mitigation measures would be taken to protect resources while achieving the desired goals and objectives of the burn.

In the long-term (20 years plus), vigor and health of vegetation communities, which includes maintenance of soil stability and energy, nutrient, and water cycling, would be improved across the landscape. Water quality, vegetation, soils and dependent fish and wildlife species would all benefit from Alternative B.

4.18.3 Alternative C (No Action)

Short-term (within 10 years) use of the area would continue with current activities such as grazing, recreation, and wildlife proceeding at present levels. Revisions of 8 allotment

grazing schedules by the end of FY2000 would be required to comply with SRH. Proposed grazing schedules developed for Alternative A would likely be used with this Alternative. The objectives of maintaining or improving ecosystem function so that resource values would move towards DRFC would continue at a slower rate than Alternatives A and B.

Long-term (20 years) vigor and health of vegetation communities, which includes maintenance of soil stability and energy, nutrient, and water cycling, would still be the goal across the landscape. The rate at which this might be achieved is the slowest of the 3 alternatives.

4.19 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be reversed, except perhaps in the extreme long-term. Many incised stream reaches currently in nonfunctional condition or functioning at risk with a downward trend would continue to downcut to a hard layer as a result of the continuation of hydrologic processes, regardless of the alternative selected. This would be an irreversible loss of soils in those incised stream stretches. Correspondingly, those upland and riparian pastures that are currently non-functional with a downward trend risk passing the threshold where they can no longer be returned to a productive state. The rate of recovery for these vegetation communities would be the fastest under Alternative B (Suspended Use) followed by Alternative A (Proposed Action) and Alternative C (No Action).

All three alternatives would require that a survey for cultural resources be completed prior to project implementation. The possibility still remains that cultural resources could be damaged or destroyed during project implementation which would be an irreversible loss of the resource.

There were no other irreversible commitments of resources identified with any of the 3 alternatives.

Irretrievable commitments of resources are those that are lost for a period of time. In analyzing the 3 Alternatives, all would have irretrievable commitments of resources. The gap between those pastures in poor condition not meeting one or more of the 5 SRH and their potential productivity is an ongoing irretrievable loss. Alternative C (No Action) would have the greater likelihood of irretrievable commitment of resources due to the longer time frame involved with implementing the changes needed to improve resource values.

4.20 Summary of Environmental Effects

A summary of environmental effects is contained in Appendix 1 of this document.

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6.0 LIST OF AGENCIES AND PERSONS CONSULTED

Public involvement was an ongoing process which occurred prior to and during LAMP development. During scheduled public scoping meetings, public informational meetings, and during public review of the Draft LAMP, the public was provided a platform to address their concerns and comments on resource issues, management objectives and recommendations.

Responsible participants and their level of involvement in this LAMP was determined by land ownership and the position and pattern of property within the landscape area. More than 120 individuals were involved with the development of the LAMP. A list of participants is on file at the BLM Vale District Office. This included:

- Malheur County Soil and Water Conservation District
- Malheur-Owyhee Watershed Council, Bully Creek Watershed Coalition
- Oregon Department of Fish and Wildlife
- Natural Resources Conservation Service (NRCS)
- Environmental organizations
- Livestock operators and other interested publics having interests within this landscape area.

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Appendix 1 -

Summary of Impacts by Alternative by Resource Value

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Air Resources	Meets Class II Airshed Standards.	Same as Alternative A except: - Direct and indirect impacts to the air resources from project implementation would be slightly less than Alternative A due to less prescribed burning.	Same as Alternative B.
Geology , Energy, and Mineral Resources	No impacts.	Same as Alternative A.	Same as Alternative A.
Soils	Of the total 109 pastures in the landscape area: - 89 pastures are meeting Standard 1 of SRH and would move towards DRFC - 20 pastures where soils are preventing the attainment of Standard 1 would progress towards meeting Standard 1 of SRH and DRFC	Same as Alternative A.	Of the total 109 pastures in the landscape area: - 89 pastures currently meeting Standard 1 of SRH would remain as they are - 20 pastures in a degraded condition would remain as they are -Long term increase in erosion rates from lack of fire in juniper vegetation

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Vegetation Uplands Riparian	- 22 of the total 36 upland trend studies moving towards current upland objectives would continue over the short term (10 years). - Herbaceous species composition increases - Plant vigor, seed production, seedling establishment, root production and litter accumulation promoted - Forage production increases - Sagebrush and juniper cover decreases slightly - Trampling of vegetation next to fences and water developments - Increased use of vegetation on private land - 48 miles of riparian vegetation in PFC would remain in PFC - 49 miles of riparian vegetation FAR with an upward trend would continue to improve - Portions of 57 miles of riparian vegetation FAR with trend not apparent would improve - 35 miles of riparian vegetation FARD would improve. - 21 miles of stream that are NF where livestock use has been identified as a factor limiting attainment of PFC would improve. In some areas recovery may require a longer time frame but recovery would occur. - 47 of the 56 pastures identified as having riparian resources are currently not meeting Standard 2 of SRH. 18 are caused by current grazing management practices and would move towards meeting standards in the short-term.	Same as Alternative A except - Improvement to vegetation community increases at a faster rate - 14 of the total 36 upland trend studies not meeting objectives would be expected to move towards meeting objectives in 3 years. - Large increase of upland vegetation use on private land due to the 17,598 AUM reduction on BLM managed land in first 3 years Same as Alternative A except: - Portions of 57 miles of streams currently FAR with an unapparent trend, 35 miles FARD and 21 miles of stream that are NF where livestock use has been identified as a factor limiting attainment of PFC would have a greater short-term rate of recovery than Alternative A and C. - The 18 riparian pastures in which SRH Standard 2 was not met due to grazing management practices would have a faster rate of recovery than Alternatives A and C.	- 22 of the total 36 upland trend studies meeting objectives would remain as they are - Degraded conditions in 14 of the total 36 upland trend study areas would continue - Grazing schedules would need to be developed on the pastures where the 14 upland studies showing degraded conditions are located with recommendations to improve. Same as Alternative A except: - 48 miles of riparian vegetation in PFC, 49 miles of riparian vegetation FAR with an upward trend, portions of 57 miles of riparian vegetation FAR with trend not apparent would continue as assessed. - 35 miles FARD and 21 miles of stream that are NF where livestock use has been identified as a factor limiting attainment of PFC would also continue as assessed. In some areas recovery may require a longer time frame but recovery would occur. -- The 18 riparian pastures in which SRH Standard 2 was not met due to grazing management practices would continue to FAR or become NF
Special Status Plants Aspen - 20 pastures containing aspen	No impacts. - Proposed 3200-acre prescribed fire in Willow Basin and Bully Creek pastures of the Willow Basin allotment would benefit aspen regeneration - Remaining 18 pastures that have an aspen vegetation community would continue to decline but beneficial projects to improve them would be initiated in later years of implementation.	Same as Alternative A. Same as Alternative A except: -Of the 24 pastures not meeting SRH caused by livestock grazing practices, 10 contain aspen vegetation. Cattle would be excluded for a minimum of 3 years from these 10 pastures resulting in moderate aspen regeneration in the short-term.	Same as Alternative A. Same as Alternative A except rate of implementing new projects to improve aspen stands would be much slower.

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
		- In 10 aspen pastures not deferred from livestock grazing the health of aspen would continue to decline until projects could be implemented to improve them	
Weeds	- Proliferation of weeds controlled on an annual basis which is expected to slow the spread of established stands and reduce the establishment of new infestations.	Same as Alternative A except: - In areas where perennial grasses and shrubs can respond from no grazing for a minimum of 3 years, competition from the perennials may retard the establishment of new infestations faster than Alternative A.	Same as Alternative A.
Fire History and Management	- Prescribed fire would be conducted in the landscape area where vegetation communities are not meeting resource objectives for diversity, composition, structure, and wildlife habitat needs. - The number of large wildfires and acres burned may be slightly reduced with prescribed fires reducing the amount of burnable fine fuels needed to carry larger fires.	- The number of large wildfires and acres burned is expected to increase with the increase of the amount of fine fuels present as a result of no grazing on 45 percent of the landscape area (120,371 acres). Refer to Table 1.	- The Rail Canyon prescribed fire begun in 1999 would be completed in the next 1-2 years. Additional prescribed fires have not been identified although this still remains an option.
Hydrology and Water Quality	- Water quality would be improved with increased vegetation and soil stability. - Water temperatures would lower with increased riparian vegetation shading. - Streambanks would begin to stabilize and there would be an increased filtering of sediments as early season grazing schedules are implemented which promotes regrowth of riparian vegetation after livestock leave the area. - Development of riparian pastures would help to reduce coliform counts and erosion from hoof action. - Major roads crossing streams that are not hardened would continue to cause localized disturbances and downstream sediment flow.	Same as Alternative A except: -The rate of improvement would be accelerated with the suspension of livestock use for a minimum of 3 years.	Same as Alternative A except: - Solutions to resource problems may not consider the entire landscape area and may occur later in time. - The conditions of streams would continue to degrade in areas not meeting Standards which could impact downstream areas. -The level of prescribed fire may be less under this alternative which could result in more frequent and widespread, wildland fires. This scenario could result in increased soil erosion with negative impacts to hydrology and water quality. - 8 of 12 I and M allotments would require AMP revisions to be in compliance with SRH prior to March 1, 2000.

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Fisheries	<ul style="list-style-type: none"> -Fish habitat (improved water quality and lowered temperatures) would improve on all streams from increased riparian vegetation shading along streams and stabilization of streambanks. - 3 reservoirs where cattle would be excluded would have improved habitat for hatchery rainbow trout due to reduced siltation and fecal material and increased bank vegetation. 	<p>Same as Alternative A except:</p> <ul style="list-style-type: none"> - The rate of change would be faster than Alternative A and C. - Fish habitat conditions would decline over the short term from the expected increase in the number of large wildfires and acres burned. This is anticipated as a result of the increase in the amount of fine fuels present as a result of no grazing on 45 percent of the landscape area (120,371 acres). 	<ul style="list-style-type: none"> - Fish habitat would slightly improve in 48 miles of the streams in PFC. - unsatisfactory fish habitat conditions would persist in at least one stream segment comprised of 33 pastures

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
<p>Wildlife - mule deer and pronghorn critical winter habitat</p>	<p>- Eight of 32 pastures not meeting SRH Standard 5 due to current grazing management practices would move towards meeting the Standard in the short-term (10 years).</p> <p>- Short-term improvement in habitat conditions with improved grass and forb understory.</p> <p>- Changes in grazing seasons in mountain shrub communities would promote plant growth and seedling survival.</p>	<p>- Eight of 32 pastures not meeting SRH Standard 5 due to the current grazing management practices would move towards meeting the Standard within 3 years.</p> <p>- Slight to moderate short term improvement in winter mule deer and pronghorn habitat would occur with the removal of livestock in 12 pastures deficient in grass or forbs. The vigor of established plants and seed production would be expected to increase improving habitat</p>	<p>- Eight of 32 pastures not meeting SRH Standard 5 due to current grazing management practices would remain as they are.</p> <p>- Continuation of current management would leave 57 pastures in I and M allotments not meeting SRH necessary for healthy fisheries and wildlife.</p>
<p>-aspen/juniper woodlands</p>	<p>Proposed prescribed burns in four pastures would decrease structure and cover habitat for mule deer, elk and several songbird species in the short-term. In the long-term following burns, grassland habitats would be enhanced by improving forage for elk, mule deer and pronghorn antelope. Wildlife habitat would also be improved by providing a mosaic of habitat conditions for a diversity of species.</p>	<p>- A slight increase in wildfire potential would occur with the increased amount of fine fuels present as livestock are removed in 24 pastures that would be scheduled for a minimum 3 years of non-use by livestock. Fires in 8 pastures would decrease structure and cover habitat for mule deer, elk and several songbird species in the short-term.</p> <p>- In the long-term following burns grassland habitats would be enhanced by improving forage for elk, mule deer and pronghorn antelope. Wildlife habitat would also be improved by providing a mosaic of habitat conditions for a diversity of species.</p> <p>- Aspen communities would not improve in 2 pastures where livestock would be removed for a minimum of 3 years due to high elk populations. Elk would likely increase their aspen consumption proportionate to the reduction in livestock use.</p>	<p>- Mountain shrub communities important to wildlife would remain in unsatisfactory condition caused by the current grazing season of use.</p> <p>- Currently only 15 pastures have wildlife objectives identified in allotment management plans.</p> <p>- 13 pastures have decadent crested wheatgrass seedings or locked-in annual rangelands that are in poor condition as big game winter range.</p>
<p>- riparian areas</p>	<p>- moderate wildlife habitat improvement in the short- and long-term due to increased woody vegetation and longer availability of surface water in some drainages.</p>	<p>- Livestock use in 18 pastures with riparian vegetation would be suspended for a minimum of 3 years. This would result in a short-term increase in growth of woody vegetation and residual cover enhancing the habitat for big game and songbird use. In the long-term, the slight improvement to the riparian habitat would continue.</p>	<p>- Riparian areas currently not in PFC or in an upward trend would not provide potential habitat for wildlife.</p>

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
special status wildlife	<p>-Slight to moderate improvement of spotted frog, redband trout and bald eagle habitat in the short-term and moderate habitat improvement in the long-term from improved water quality and quantity.</p> <p>- Moderate benefit to sage grouse habitat from: deferment of cattle into pastures with leks until after the courtship period; maintaining 7-9 inches of herbaceous cover within 2 miles of leks; and prescribed fire removing encroaching juniper trees from nesting and brood rearing habitats in 3 pastures.</p> <p>- Slight to no adverse impact to sage grouse winter habitat where sagebrush would be removed to enhance old seedings or reseedling of annual rangelands.</p>	<p>Same as Alternative A except:</p> <p>- 3 years of non-use in 6 pastures within 2 miles of sage grouse leks would improve vigor of existing grasses and forbs enhancing protection of grouse nests from predators.</p> <p>- Potential for increased fire from the buildup of fine fuels with a minimum 3 year exclusion of cattle would reduce juniper encroachment in these same 6 pastures resulting in slight to moderate habitat improvement.</p>	<p>- In the 12 pastures currently managed with objectives with objectives to maintain or improve riparian resources, species dependent on riparian and aquatic habitats would continue to benefit from management actions. The 44 newly identified riparian pastures would not have management objectives developed and would continue to be impacted by current grazing objectives that do not recognize riparian values.</p> <p>-18 pastures where riparian areas FAR or in a downward trend would continue not to meet special status animal species needs.</p> <p>- Sage grouse nesting and brood rearing habitat would continue to decline in all pastures experiencing juniper encroachment.</p>

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Rangeland/Grazing Use - Rangeland Projects			
Livestock Preference	- No decrease in livestock preference.	- Suspension of livestock preference of 17,598 AUMS (41percent) a minimum of 3 years or until SRH met on 8 allotments	Same as Alternative A.
Implementation of new grazing management strategies	- All 20 allotments with landscape area have new grazing management strategies implemented.	- 12 allotments within the landscape area have new grazing management strategies implemented..	-Two to three allotments might be evaluated under the current schedule with new grazing management strategies developed.
Proposed Projects:		Same as Alternative A except:	
-Vegetation Treatments	-16,840 acres proposed for vegetation treatment plus those to be planned for Richie Flat Allotment (source LAMP, Appendix A - Table 8) would occur.	- The priority of constructing projects would not be necessary until progress toward meeting SRH has been attained through livestock exclusion. The proposed projects may not be valid following the exclusion period and would need to be reevaluated based on current resource needs.	Same as Alternative A except the proposed projects would occur later in time.
- Water Development s	-1 windmill constructed, 8 new pipelines/springs constructed, 4 pipeline/springs maintained		
- Fence Construction	- 19 miles of fence constructed plus Willow Creek fence, and 7 exclosures constructed where springs empty into reservoirs.		

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Recreational and Visual Resources	<p>-No short-term impacts to recreation resources or uses. As habitat conditions improve wildlife populations may grow enhancing long-term recreation opportunities.</p> <p>-Visual resources such as visual quality would be enhanced as habitats conditions improve which currently are not functioning properly. Visual impacts from vegetative manipulations would be the greatest under this alternative since the largest number of acres for treatment are proposed.</p>	<p>Same as Alternative A except:</p> <p>-Suspension of livestock use in 8 allotments (24 pastures) encompassing 120,371 acres would enhance the quality of a recreational experience for those who desire not to have their activities influenced by the presence and affects of livestock use.</p> <p>- Within riparian and aspen areas affected by a minimum 3 year livestock suspension of use, recreational opportunities such as hunting and camping would be enhanced.</p> <p>-Visual resource values such as scenic quality would be enhanced at an accelerated rate when compared to Alternatives A and C with the suspension of livestock use for a minimum of 3 years. This would be particularly apparent within riparian corridors and aspen communities. Visual impacts from vegetative manipulations would fall into a range between Alternatives A and C.</p>	<p>- Under this alternative, enhancement of recreation uses and opportunities would take the greatest period of time if accomplished at all. Improvement to dispersed recreation-dependent resources and habitat conditions would be dependent on the rate developing/updating and implementing individual AMPs. Any enhancement of recreational opportunities would occur sporadically with no continuity or connectiveness within the landscape area.</p> <p>-Visual resource values would be enhanced at the slowest rate under this alternative. Improvement of visual quality in riparian and aspen communities would be sporadic and disjointed. Visual impacts from vegetative manipulations would be the least under this alternative and be less evident through time.</p>

	ALTERNATIVE A - PROPOSED ACTION	ALTERNATIVE B - SUSPENDED USE	ALTERNATIVE C - NO ACTION
Cultural Resources	- The reduction in soil erosion and fencing and reduced use of riparian areas would benefit cultural resources by maintaining site conditions.	Same as Alternative A except: - There would be a temporary reduction in impacts to cultural resources from the minimum 3 year suspension of livestock grazing. Vegetation growth and cover would reduce the visibility of sites and decrease the effects of wind and soil erosion to cultural sites.	- Cultural resource sites would continue to be negatively impacted by soil and wind erosion and continued heavy livestock use in riparian areas.
Paleontology	Unknown impact.	Same as Alternative A.	Same as Alternative A.
Access	Four roads (553, Gregory, Pole Creek and Spring Road) have been identified for the acquisition of non-exclusive easements.	Same as Alternative A.	Same as Alternative A.

Appendix E

Responses to Public Comments

Summary

Public Comments Received

Nineteen public comment letters were received during the extended 50 day public comment period that ended mid-September, 1999. Each letter was assigned a number and an Index is attached for reference.

Organization of Comments and Analysis Process

A team of specialists reviewed each comment letter and identified comments within each letter that needed to be answered. These comments were divided into 22 categories and assigned to staff specialists to develop responses.

How do I find BLM's Response to my Comment(s)

To find responses to comments, find the number that was assigned to your letter in the Table. For example, comments from the County of Malheur were assigned the letter number 005.

Next review your initial letter and see what comments were made and what category they would fit into. For example, County of Malheur raised a concern over BLM's discussion of the contribution of federal lands to the livestock industry in Malheur County. Refer to the Category Index under economics for a page number (p 14-15), go to those pages and find Letter 005. The comment is stated followed by BLM's response. If a letter had several comments dealing with the same category, all the comments would be listed first with an individual number assigned followed by numbered responses which match the individual comment.

If we have previously answered your comment, we referred you to that letter and our response, rather than repeating the response. Some of the comments were paraphrased for clarity.

Numerical Index

Letter No.	Addressee	
001	George and Rhonda Ostertag 98303	Keizer, OR
002	Tom McElroy 97918	Vale, OR
003	Bob Moore 97914	Ontario, OR
004	Dr. J. Wayne Burkhardt 83632	Indian Valley, ID
005	County of Malheur 97918	Vale, OR
006	Roger Corrigan	
007	Patricia Larson Ecosystem Research and Analysis 97850	LaGrande, OR
008	Thomas Bedell 97370	Philomath, OR
009	Roger Corrigan-hand delivered packet of petitions	
010	Robert Kindschy 5301	Vale, OR 97918-
011	Dan Jordan 97920	Westfall, OR
012	Tom McElroy 97918	Vale, OR
013	Tony Joyce Joe McKay	Juntura, OR 97911
014	Conrad Bateman Rangeland Consultant Services 97918	Vale, OR
015 LAMP	Idaho Watershed Project John Marvel, President 83333	Hailey, ID

016	Idaho Watershed Project	John Marvel, President	Hailey, ID
EA	83333		
017	Bully Creek Watershed Coalition	Stan Shepherd, President	
018	Dr. Clinton Shock	Malheur Experiment Station	Ontario, OR
	97914		
019	Jordan Valley Permittees		

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CATEGORY 1 - Cumulative Impacts - EA

Letter 007

COMMENT

1 - In the EA under Cumulative Impacts Alternative A on page 28, Section 4.16.1 - first sentence. There is no assessment provided in this document regarding historical use as compared to current uses. How did you do this analysis? Concerning the last two paragraphs on page 28 - Discuss this with more clarity. Provide a chart or better description to indicate how implementation will happen or even if it will. Which projects will and won't happen? What is meant in the first sentence: "the need to implement any activities would be assessed"?

2 - Under Cumulative Impacts - Alternative A on page 29- first paragraph you state "The use of fire is expected to increase over past and current levels? More discussion of the use of fire should be given. In the same paragraph you state "Wildlife populations are expected to rise over current numbers, corresponding with habitat improvement". There is nothing presented here that supports this idea. What will be the percent increase and which species are you likely talking about? You also state "The effects of increasing numbers of big game may be positive (in terms of recreational opportunities) and negative (contributing to vegetation, soil, water quality degradation). There is nothing presented here that supports this idea. There has been no discussion about this and no data provided to even suggest it has been considered.

RESPONSE

1 - Historical use versus current use has been referenced through the Affected Environment Section in the EA to Section 5.0 (Characterization of the Landscape Area) in the Bully Creek LAMP. Reference to the past grazing schedules compared to the proposed schedules has also been identified in Appendix C, Allotment/Pasture Characterizations and Grazing Schedules. The analysis involved the review of all allotment evaluations and vegetation studies including photo points, trend, canopy cover, actual use and utilization records beginning as far back as 1969 to present. Old allotment objectives and associated grazing systems were also compared to the current ones to see if progress had been made toward meeting the objectives.

Implementation of the LAMP has been described in the EA under Section 2.1 Alternative A - Proposed Action. Reference is also made to Section 7.0 Recommendations and Implementation which describes the project prioritization process and identifies the project implementation schedule in the LAMP (Appendix A, Table A-8). Implementation of new grazing schedules are recommended for the year 2000 and identified in Appendix C of the LAMP.

Concerning the phrase "the need to implement any activities would be assessed" is part of the larger sentence - "Because the exact location, timing and duration of future (beyond FY 1999)

activities is unknown at this time, the need to implement any activities would be assessed to ensure they are within the scope of the LAMP, and do not exceed thresholds (cumulative impacts) for disturbances as described in the Draft SEORMP/EIS (USDI/BLM 1998b)". The word "assessed" means that if an activity exceeds the thresholds as identified, the BLM would have to complete appropriate NEPA analysis to determine whether to initiate the activity or not.

2 -We agree that more discussion of the use of fire should be added to this section. We have brought forward information contained on in the EA Section 4.6 Fire History and Management to the Cumulative Impacts Section. Please also refer to the new Table added to this section describing prescribed fires proposed under Alternative A. The sentence ... "The use of prescribed fire would increase over current levels conducted in areas of the landscape where vegetation communities are not meeting resource objectives for diversity, structure, and wildlife habitat needs".... has been added..

The sentence "Wildlife populations are expected to rise over current numbers, corresponding with habitat improvement" is supported by the following explanation:

In the first section of the LAMP a number of general and specific management activities are proposed, especially changes in livestock grazing practices. We state that the primary purpose of changing

livestock management is to correct problems of rangeland health but we also believe most of these actions will improve wildlife habitat. For example, we proposed new grazing systems to increase the amount of vegetation on stream banks to improve the functioning of riparian areas during spring runoff. However, we anticipate the cumulative effect of improved riparian health will be improved wildlife habitat since taller grasses along a streambank would be potential nesting sites for waterfowl, or better hiding cover for fawns, for example.

In Section 4.8.2.1 of the EA we analyzed the anticipated impacts of management activities we believed would have the greatest effects on habitat of wildlife and fish. We anticipated the habitats of some

species would be adversely affected and other habitats would be benefitted by certain aspects of the proposed project (EA Section 4.8.2). In the EA Section 4.16.1, we also disclosed that the overall effect of implementing the project would be beneficial to wildlife habitat (and therefore to populations) due to individual benefits outweighing negative impacts. We identified the primary species of concern to be Special Status Species such as red-band trout and sage grouse plus big game species including mule deer, elk and pronghorn antelope (LAMP Section 5.11). We do not know what numerical or percentage change will occur in wildlife populations as a result of implementing any alternative, however, we believe that these proposed actions will allow big game populations to remain within the management objectives set by Oregon Department of Fish and Wildlife. We also believe that these actions will reduce the need to list any plant or animal under the Endangered Species Act.

To elaborate on the discussion in the EA Sections 4.8.2.1 and 4.16.1, a prescribed fire would have an immediate adverse affect on herbaceous vegetation that elk consume, and on juniper that elk use for hiding cover. However, we anticipate the herbaceous vegetation to quickly recover, and it should provide higher quality forage for elk within a year. Elk are highly mobile animals and we anticipate they will use adjoining, unburned juniper-covered rangeland for hiding cover and travel to the burned areas to feed. Therefore, elk numbers probably will increase until the amount of juniper hiding cover is markedly reduced through the cumulative effects of these proposed burns and future juniper control activities. Since elk are highly prized game animals and recreational activities in Bully Creek primarily are based on hunting (LAMP Section 5.15) we anticipate fire management to be beneficial to this activity during the initial phases. However, we identified elk as having a major impact in many riparian and aspen communities (LAMP Sections 5.6 and 5.15), therefore an increased elk population is expected to negatively affect vegetation, soil and water quality. In addition, we identified elk depredation as an economic problem for some landowners in the Bully Creek subbasin (LAMP Issue 6, and also see letters 009, 013, and 019) and therefore an increased elk population may have impacts off public lands. As discussed in Issue 6 (LAMP Section 2), one of the goals of the proposed management project is to improve the condition of the public lands so that big game species will not need to travel onto private lands where they cause damage. The Adaptive Management strategy (LAMP Section 1.4) will give BLM the flexibility to evaluate the relative amounts of elk population increases (from ODFW), riparian impacts, recreational benefits and private land depredation in relation to the land treatments conducted and proposed in the future to balance benefits and losses across the landscape.

The sentence “The effects of increasing big game may be positive (in terms of recreational opportunities) and negative (in terms of contributing to vegetation, soil, water quality degradation) is supported by Section 5.15 of the LAMP which characterizes the Recreational and Visual Resources within the Bully Creek landscape area. The EA refers the reader to this section of the LAMP for a further description of the Affected Environment. Section 5.15 of the LAMP establishes dispersed hunting and the associated motorized vehicle-supported camping as the primary recreational activity occurring within the LAMP area. This section also states that the habitat types in the landscape area support wildlife populations which receive some of the greatest hunting pressures within the MRA. ODFW big game data are referenced to support estimates of recreation levels on public land within the area.

CATEGORY 2 - Data Accuracy, Collection and Analysis

Letter 006

COMMENT

1 -It is possible BLM personnel collected erroneous information by using data collected from only one trend plot. The upland trend plot in the Mountain Pasture of Brian Creek Allotment does not represent the trend in most of the pasture. The Data Summary for Mountain Pasture in Appendix C states that the upland trend is up for both the long and short term. Possible indicators overlooked or missed indicating an upward trend are:

- 1) Rising water tables in drainages
- 2) No dying or low vigor plants (Key species)
- 3) Numerous young plants (Key species)
- 4) Increased density of Key species throughout most of the pasture
- 5) Evidence of sagebrush plants dying in drainages and uplands

2 -The Data Summary for the North and South Seeding in the Mountain Pasture concludes that the long term trend in the north and south seeding is down. However, the short term trend from 1993 to present is up. BLM did not mention that a severe and long duration drought beginning in 1984 and continuing through the growing season of 1992 was a contributing factor to the downward trend in these seedings. Long term trend in most crested wheatgrass seedings within the Bully Creek Landscape area is down.

RESPONSE

1 -BLM used the best data available to make the assessment of conditions. Approved BLM methods were used for trend data. The trend plot is located in an area where we believe it will show changes in trend that reflect general change throughout the pasture. The Data Summary table in Appendix C shows the Mountain Pasture trend is Static for the long-term and Static to Upward in the short-term. In reference to the possible indicators overlooked or missing which would indicate an upward trend:

- 1) The BLM did not collect data on the depth of the water table in Brian Creek Allotment and did not make a determination of upland trend based on this parameter.
- 2) During the 1998 assessment of upland conditions in Mountain Pasture the interdisciplinary team recorded cheatgrass in open places, whitetop invading along the road, and the productivity, recruitment and seed production of key grasses was less than what was seen in nearby pastures and in exclosures on Cottonwood Mountain. These observations, in addition to the data collected on the line intercept transect, the 3' X 3' trend plot and the photographic monitoring plots forms the basis of our conclusion on trend. These studies were initiated in 1983 and have now been read three times.

3) As above, in 1998 we noted a lack of seed production and recruitment in upland areas compared to similar sites in other grazed pastures and in exclosures on Cottonwood Mountain.

4) We read the 100 foot line transect three times and recorded a change in bluebunch wheatgrass from 2.28 feet of basal area per 100 feet of transect in 1983 to 1.18 feet in 1995 to 2.94 feet in 1999. Because of the increase in desirable grass we categorized the trend as Static to Up.

5) We did not note any unusual sagebrush mortality in uplands within Brian Creek Mountain Pasture in 1998. Aroga moths are apparently causing localized mortality in upland sites in a few other allotments within the Bully Creek subbasin. The photographs, data sheets and write-ups from 1997 and 1998 riparian inventories did not record sagebrush mortality, increased width of riparian vegetation or channel building in Brian or Brady Creeks.

2 - Our assessment of trend in North Seeding was conducted in 1983, 1995 and 1998 and recorded a change in crested wheatgrass from 2.64 feet to 0.45 feet to 0.91 feet of basal area per 100 feet of transect measured. respectively. We also noted a change in sagebrush cover from 1.26 feet in 1983 to 19.55 feet in 1998. We agree that drought may have played a role in the downward trend in this crested wheatgrass seeding. However, the BLM is required to implement changes in grazing practices that will result in healthy rangelands. While a recent slight improvement was observed in the basal area of the crested wheatgrass in the short-term the significance of this increase is minimal and is far out weighed by the large increase in sage brush.

Letter 007

COMMENT

1 -In the first sentence under Data Collection and Analysis on page30 - How much “numerous” data were collected across the landscape area in the summer of 1988? How much of this document is actually from different kinds of “numerous” data collected during the last 12 years?

2 -Under Results of Data Analysis on page 31 - the statement is made “For all standards for rangeland health which fail to meet PFC, the current contribution of livestock was identified”etc. How has this planning document managed to link the issues of water quality, riparian functions, and activities on the land without any data or measurements to support such ties?

3 -In the second paragraph under Results of Data Analysis on page 31 - Does anyone have

information about why Richie Flat uniformly shows upward trends? Which years was data collected at Richie Flats? It should be included here in order to understand why it is mentioned as an exception.

4 -In the third paragraph under Results of Data Analysis on page 31 - you state “However, short-term trends indicate that crested wheatgrass cover has stabilized at a new low slightly increasing in nine of the pastures, while continuing to decline in five. What evaluation do you give about the crested wheat seedings now becoming stabilized at a new low?

5 -On page 32, fourth paragraph-last two sentences you say “ Forty seven of the 56 pastures were evaluated as not meeting Standard 2 for SRH. Twenty two of 56 pastures did not meet the standard as a result of current grazing management practices while the remaining 25 pastures did not meet standard due to other factors. How was livestock use determined to be the cause in regards to Standard 2 and separated from “other factors”?

6 -In the sixth paragraph on page 32 - second sentence. How much is “almost all”? And how are you defining “declining health”? How much reproduction was there? When was the last reproduction survey made? Was this just ocular estimation during 1998 or does BLM have a management plan that routinely inventories aspen stands in the area? Please rewrite this section and describe what the problem is and the implied necessity of aiming specific management projects toward aspen stand improvement.

7 -In the seventh paragraph on page 32 - This section should be re-written also and include more than just a quick overview that named allotments showed deficiencies. What were these deficiencies? Were they all the same?

8 -Concerning the last paragraph on page 32 and first paragraph on page 33. Include more detail on this item. Non-point pollution is not such a simple matter as to be able to wave one’s arms across the landscape and say that it is just there. What reaches are contributing to the poor water quality on Bully Creek and Pole Creek? Are all beneficial uses being affected? Which of the resident fisheries are being affected by water temperature? Do the resident fish in all the streams of the plan area require water temperature and sediments to be at the same levels as Chinook salmon, steelhead, and bulltrout? What are the impacts to the fisheries in the Bully Creek sub-basin?

9 -Second paragraph on page 33. Why did Richie Flat, meeting all the other standards fail on this one? What are “other factors”? How do the current gazing management practices cause the named allotments to fail Standard 5?

10 -Third paragraph on page 33. In Appendix C where have you provided supporting data? Most of the descriptions of non-attainment in Appendix C must be re-written to include a better assessment of the conditions and causes for non-attainment of Standards.

RESPONSE

1 -As explained in Section 6.0 of the LAMP and in Appendix C (pages C-2 to C-6), the BLM collected information to evaluate each large pasture in each I and M allotment (about 75 pastures in all) using methods developed for assessing rangeland health (SRH). We repeated the existing studies used in previous rangeland evaluations. Most of these studies were initiated more than 12 years ago with some initiated as early as 1970. These included: permanent 100 foot line transects, mapping and photography at 3'x3' plots, other photo points, actual use, utilization, climate and low-level aerial photographs. We recognize the importance of consistency of monitoring and we took into account variations such as drought years, change in class of livestock, or changes in season of use.

2 -The BLM's use of the term "Proper Functioning Condition" (PFC) confused many readers as we used the term in relation to each of the 5 Standards of Rangeland Health, not just to the riparian issue (Standard 2), where it traditionally has been applied. We have changed the sentence to read..."For all standards for rangeland health which fail to meet minimum criteria the current contribution of livestock was identified." Sections 6.1 and 6.2 of the LAMP explains what data was collected and how it was analyzed.

3 -Information on Richie Flat allotment suggests several interrelated factors resulted in the upward trends. Actual livestock use on this allotment between 1986 and 1995 was down when the allottee converted primarily to a sheep operation. The current allottee runs sheep and cattle. We attribute the upward trend on native and seeded pastures, which has occurred even during the drought years, to lighter use and the different grazing practices of sheep compared to cattle.

4 -Based on photographs and line transect measurements of crested wheatgrass basal area and sagebrush canopy cover taken during a 15-20 year period in various pastures and reviewed in relation to precipitation, we observed a general reduction in grass and an increase in brush. Since the end of the drought and probably as a partial result of changes in some grazing systems, range conditions have generally remained stable or improved in 10 pastures while still declining in one.

5 -Please refer to our response 2 in this section.

6 -Information on relative health of aspen stands was collected during the riparian inventory for Standard 2 as well as by using ground photos, low level aerial photography and monitoring conducted for previous allotment evaluations. Aspen stands occur or did occur (based on the presence of dead trees) along mid to high elevation riparian areas. Not all snow pocket stands of aspen were not visited during the 1998 upland inventories. The health of the stands generally refers to the age class structure of the community, i.e. the typical stand was comprised of only large, mature aspen with many dead branches and few root suckers, all of which were heavily browsed; these stands were considered to be "declining in health" or in a "downward trend". In comparison, we observed several aspen stands that had all age classes present, with vigorous top branches, light to no browsing of root sprouts and a thick herbaceous understory; these were

considered to be "healthy". BLM currently does not have an aspen management strategy and has not routinely collected information on aspen stand health. We included the resolution of aspen concerns in the broader topic of riparian health (LAMP Section 5.6) and have proposed to reduce livestock impacts by season-of-use prescriptions rather than projects. We acknowledge that browsing by elk is a major impact on some riparian areas and have developed a strategy to attempt to resolve this complex issue where both livestock and elk are focusing on young aspen (see Response to Letter 007, Comment 2, in the Cumulative Impact Section). We conducted a prescribed burn followed by brush piling around top-killed aspen in the Rail Canyon area of Bully Creek subbasin in 1998-99 in an attempt to encourage aspen regeneration and to learn how livestock and big game respond to this type of treatment.

7 -The detailed information is presented for each pasture in Appendix C rather than in the text and in Appendix C.

8 - We have rewritten several paragraphs to read:

For Standard 4 (water quality), two stream segments have been identified as having deficiencies within the landscape area. These stream segments are Bully Creek from Westfall to Bully Creek Reservoir and Pole Creek from the mouth to the headwaters (Oregon Department of Environmental Quality, 1988). Section 5.10 (Water Quality) and Table 4 in the LAMP also describes in more detail the reasons for these listings and some probable causes for non-point source pollution. Although water quality impacts have been identified for only these two stream segments, other streams in the landscape area exhibit all or many of the same non-point source pollution problems. These deficiencies impact the beneficial uses determined for this area specifically water quality, fisheries, aquatic habitat, and water contact recreation. Long-term water quality data are sparse for the entire landscape area.

Concerning your questions on the affects to resident fisheries please refer to our response 2 to letter 007 in the Fish and Aquatic Habitat Section of this document.

9 -As indicated in Appendix C Richie Flat Allotment summary data, three pastures were not fully meeting Standard 5. The presence of sage grouse leks in these and some adjoining pastures and likelihood of grouse using these pastures for nesting and brood rearing created a high priority for a forb component in the plant community. The seeded portion of South Ridge pasture was deficient in vegetative diversity, lacking a forb community, while the native portion of the pasture met wildlife needs. In Richie Flat pasture the seeding lacked forbs and had abundant exotic annual weeds that detracted from the native plant community. East Log Creek Pasture was generally in excellent condition for native plant and wildlife communities except in the pockets of stiff sage on the southeast side where cattle and sheep typically congregate. Based on comparisons to other seedings that met Standard 5, and other pastures with the same mix of plant communities, we proposed changes in seasons of use, and in the case of East Log Creek, a different location for bringing livestock into the pasture as the preferred means to improve conditions (rather than a reduction in livestock numbers). In South Ridge pasture we also

proposed brush beating and seeding of native forbs to improve forage conditions while retaining a shrub component in much of the pasture. “Other factors” referred to previous grazing systems, drought, and the method of brush control applied prior to seeding crested wheatgrass.

10 -The results of our analysis are provided for each pasture in each allotment in the tables that accompany each pasture summary in Appendix C. Data were collected for every large pasture in each I and M allotment in the landscape area. Some small gathering or holding pastures were not inventoried/monitored and no assessment of rangeland health was made. The supporting data is comprised pages of data forms, photographic trend series, color infrared photographs, actual use submissions by allottees, trespass records, weather summaries, field notes, official correspondence, allotment evaluations, and environmental assessments that are on file in the BLM Vale District Office. The primary records we relied upon were made available to each allottee during our discussions with them on possible grazing systems for their allotment(s).

CATEGORY 3 - Economics

Letter 005

COMMENT

1 -The Bully Creek Landscape Area Management Plan drastically underestimates the contribution of federal lands to the livestock industry in Malheur County.

RESPONSE

1 - The Bureau of Land Management recognizes the importance and contribution of public lands to livestock operators and the Socio-economic Section has been edited to better reflect public comments. In the Bully Creek Landscape area, 13 operators are permitted to graze livestock and have a total of 42,366 active AUMs. Within the Malheur Resource Area, 233,607 AUMs are allocated to 152 operators. Therefore, any changes to public land use could effect 8.5% of the operators and 18% of the active AUMs in the Malheur Resource Area. However, the Bully Creek LAMP is not proposing any initial reductions in AUMs and as a result little or no impact is expected to the economic value of the livestock industry in Malheur County. On the other hand, a slight economic benefit may be realized with implementation of the LAMP and money invested in project development.

Malheur County’s livestock industry is affected by many factors other than just the use of public lands. For additional information, please see our responses to letter 018 in this section.

Letter 009

COMMENT

1 -The Socio-economic Section seems to downplay the importance of public lands to Malheur county's livestock industry, and does not mention at all the impacts to livestock related industries. To determine the economic importance of public land forage to the industry, we must first determine what percent of the total beef cattle in the county were at one time or another dependent upon the public land for forage.

RESPONSE

1 -Please refer to the response to letter 005 in this section. In addition, the methodology for determining the importance of public land forage, which has been suggested, would provide numbers applicable to all Malheur County, if such records had been kept since the 1800's. The BLM does not disagree that in the past, livestock grazing , ranching and related industries were very important to the development and growth of Malheur County. However, the BLM feels that numbers specific to the Malheur Resource Area, of which Bully Creek is a part, would provide a more specific basis for comparison and those have been added to the text.

Letter 015

COMMENT

1 -While the BLM states "the BLM recognizes the importance of custom and culture, and the need to balance these values while ensuring the sustain ability of multiple resources" it fails to anywhere address the desire of the American people to end this giveaway of public lands to a small and economically inconsequential group of people.

RESPONSE

1 -The American people are composed of a variety of individuals that have significantly different views on the management of public lands. While it is maybe your opinion that the BLM has failed to address the desire of the American people, the Taylor Grazing Act of 1934, as amended; the Federal Land Policy and Management Act of 1976, as amended; and the Public Rangelands Improvement Act of 1978 all provide the authority for BLM to authorize livestock grazing on specified lands such as those within the Bully Creek area, where appropriate.

Letter 018

COMMENT

1 -The Bully Creek LAMP should be revised to take into consideration the economic sustainability of ranching.

RESPONSE

1 -The economic sustainability of the livestock industry is affected by many factors: commodity prices, public pressure to meet environmental goals and ranch land sold for other uses, climatic changes, importation of less expensive beef from other countries, changes in people's dietary habits, recent court decisions removing livestock grazing from certain areas in the West and the business methods of individual ranchers. While many of these factors are beyond the control of the Bureau of Land Management, we believe that the management actions proposed in the Bully Creek LAMP make no significant barriers to the economic sustainability of the livestock industry in Malheur County.

We do, however, recognize that additional expenses may be incurred by hiring temporary riders for herding purposes, adding supplements, sharing in the costs of range improvement projects and additional fence maintenance to make sure utilization levels are not exceeded.

CATEGORY 4 - Fire

Letter 004

COMMENT

1 -Restoring the role of periodic fire is requisite to maintaining rangeland health. It is an ecological necessity and recently has gained a degree of political correctness. I do not think the Bully Creek LAMP adequately addresses this issue.

RESPONSE

1 -A District Fire Management Plan has been developed to implement the recent Federal Wildland Fire Management Policy (December 1995) (USDI/USDA 1995), which allows managers to integrate fire as an essential process to ensure the health and proper function of all natural systems in the landscape area, including rangelands. Prescribed fire and appropriate management response to wildland fires (less than full suppression) could be used to meet the resource goals and objectives identified in the LAMP. Although fire has not been excluded from any one area, current data supports the use of prescribed fire in several pastures within the landscape area, as identified in Appendix A, Table 9. Additional language has been added to the LAMP to emphasize the importance and application of fire as a tool to meet the goals and objectives of the landscape area.

CATEGORY 5 - Fish and Aquatic Habitat

Letter 006

COMMENT

1 - I do not know of any factual evidence or sightings that would indicate trout were ever in Reds Creek. Therefore, the statement “Riparian habitat used to support redband trout”, on page C-37, should be deleted.

RESPONSE

1 - We find this comment to be valid. The reference to trout in Reds Creek was based on a rancher’s comment to an ODFW fish biologist in 1961 and was not verified by actual sampling data.

Letter 007

COMMENT

1 -Concerning Issue #3 in Section 2. The Description needs a re-write. “Proper functioning riparian vegetation moderates water temperatures, adds bank structure to reduce erosion and provides overhead cover for fish. Floodplains with intact plant communities dissipate stream energy and store water for later release”. This is a major error. PFC makes no determination about water temperatures, nor overhead cover for fish. PFC merely describes how a stream is functioning within different reaches. There is no literature supporting the notion that the condition of fish habitat is based on a PFC analysis. It is an improper association and a misuse of the PFC exercise to suggest such a relationship.

2 -To date the streams being put on the 303(d) for exceeding the temperature standard of 64 degrees F. are in regards to “salmon” rearing streams. If Bully Creek sub-basin were to achieve a 64 degree F. standard what impact would that have on the current resident fish? This must be addresses.

3 -Comment from page 22 Fisheries and Aquatic Habitat. The second and third paragraphs should be deleted from this document since it is just an opinion and lacks any credible data collected in the area.

4 -Concerning the EA and Fisheries Section 4.8.1.1 on page 18 - It has already been pointed out

that there is no data to support the notion that riparian shading has a positive measurable influence on fish. The district has no data to support this hope. If the sediments are not harming fish then perhaps more data should be collected using a quantifiable method to determine the benefits of livestock of livestock grazing rather than assuming there are so many negative impacts. What basis do you have to know that livestock exclusions will reduce siltation and increase bank vegetation?

RESPONSE

1 - “Proper(ly) functioning riparian vegetation” refers to the condition of vegetation and not to PFC assessments. The use of “properly functioning” in regard to riparian vegetation is unnecessary and easily confused with PFC. “Adequate” or “healthy” riparian vegetation better expresses the concepts considered in Issue 3 and the text in the final LAMP will be edited accordingly.

2 - Lowering water temperature on streams where impacts have caused artificially elevated temperatures will not adversely affect native fishes, including nonsalmonids, since the 64° standard is well within their range of physiological tolerance. Reductions in stream temperatures may affect fish distribution, however, by increasing trout numbers and expanding their range into lower portions of the watershed.

3 - We disagree with your comment that no credible data was collected within the Bully Creek area to support the information in Section 5.12. During 1998 a riparian assessment was completed within Bully Creek to determine if the riparian areas were in PFC. Achieving PFC allows streams to move towards desired future condition and is the first step in water quality improvement, sediment filtration, and in ultimately providing riparian-wetland habitats that adequately support the biological diversity suitable for the landscape area. Of the total of 210 miles of riparian areas assessed in 1998, 113 miles of the streams in the landscape area were functioning-at-risk with no apparent or downward trend or were in non-functional condition. These streams can be improved and/or stabilized in their vegetative, hydrologic or soils/erosion characteristics which would result in an improvement in water quality and associated fish habitat.

The two referenced paragraphs briefly describe the typical factors influencing water temperatures and sediment loads in streams and are supported by numerous studies conducted over the past several decades documenting these typical impacts. Please see Meehan (1991) for a summary of environmental factors affecting salmonids in rangeland streams. For your review, we have also provided the following additional summaries of studies with references which support the validity of the two paragraphs.

Acute effects of grazing on stream habitats include compacting stream substrates, collapse of undercut banks, destabilized streambanks and localized reduction or removal of herbaceous and woody vegetation along streambanks and within riparian areas (Platts 1991). Increased levels of sediment can result from the resuspension of material within existing stream channels as well as

increased contributions of sediment from adjacent streambanks and riparian areas. The effects of sedimentation occur both within the immediate area of impact and downstream. Impacts to stream and riparian areas resulting from grazing are dependent on the intensity, duration, and timing of grazing activities (Platts 1989) as well as the capability of a given watershed to assimilate imposed activities, and the pre-activity condition of the watershed (Odum 1981).

Chronic effects of grazing result when upland and riparian areas are exposed to activity and disturbance levels that exceed assimilative abilities of a given watershed. A general reduction in the plant biomass of riparian areas can have multiple consequences. These can include increased water temperature, increased sedimentation, and decreased water storage (Armour et al. 1991; Platts 1991; USDI 1991; Chaney et al. 1990).

According to Chaney et al. (1990), strategies for protecting or restoring riparian areas must address the contribution of upland areas and their condition to the overall hydrologic regime. Further, strategies should include one or more of the following features: 1) including the riparian area within a separate pasture with separate management objectives and strategies from upland areas; 2) fencing or herding livestock out of riparian areas for as long as necessary to allow vegetation and streambanks to recover; 3) controlling the timing of grazing to keep livestock off streambanks when they are most vulnerable to damage; 4) adding more rest to the grazing cycle to increase plant vigor, allow streambanks to heal, or encourage more desirable plant species composition; 5) limiting grazing intensity to a level which will maintain desired species composition; and 6) permanently excluding livestock from riparian areas at high risk with poor recovery potential when there is not practical way to protect them while grazing adjacent uplands.

4 - Alternative A refers to a “slight water quality improvement” occurring as a result of decreased silt transport due to *upland* vegetation improvement. The uplands have less direct effect on streams than adjacent streambank and riparian communities, with much less sediment transport occurring on average from uplands than from banks. Excessive sediments *do* harm fish, and the main sediment source is from erosion of inadequately vegetated and stabilized streambanks.

Several scientific studies in rangeland streams support the links between riparian shade, lower stream temperatures, and salmonid production (for e.g., Platts and Nelson 1989; Li et al. 1994; Tait et al. 1994). Even in cool climates, removal of riparian shade and subsequent increases in stream temperatures can be catastrophic to salmonid populations (see Holtby 1988). References are listed in the LAMP: Literature Cited.

CATEGORY 6 - General Comments

Letter 005

COMMENT

1 - The constraints found in the Bully Creek Landscape Area Management Plan are extreme.

RESPONSE

1 - Constraints or management actions and specifically those associated with grazing utilization are similar to those imposed in other areas, such as the Trout Creeks in the southern part of our BLM District, which have resulted in positive changes in similar landscapes and ecosystems. We believe, with the cooperation of the livestock operators, management can be met and more restrictive constraints avoided.

The LAMP has not reduced any livestock allocation at this time. However, additional expenses may be incurred by hiring temporary riders for herding purposes, adding supplements, sharing in the costs of range improvement projects and additional fence maintenance to make sure utilization levels are not exceeded.

Letter 006

COMMENT

1 - Buckbrush Reservoir #4272 is not located in Brian Creek allotment.

RESPONSE

1 - This is correct and the final LAMP will be changed to move Buckbrush Reservoir #4272 from Brian Creek Allotment to Buckbrush Allotment.

Letter 008

COMMENT

1 - It is both impossible and inappropriate to go to all the effort you have made without using the CRMP (Coordinated Resource Management Plan) approach. Perhaps some CRMP effort was attempted but I could not discern it. Unless and until the cooperators on each of those allotments is or becomes a full partner in developing the objectives and agreeing to work toward them, the project is fated to fail.

2 - Also, at least two ecological terms used in the Appendix and elsewhere in the document are not used in current range management verbiage, ecosite and ecological condition. Neither are defined in the current SRM Glossary of terms. The 4th edition was published in 1998 and I recommend BLM utilize concepts and terminology contained in it.

RESPONSE

1 - A Public Participation Plan was prepared in March 1998 so that the LAMP would embrace a cooperative process throughout it's entire life span. The 3rd paragraph in this plan says, "Preparation of this Plan stresses consultation, coordination with interested/affected publics, private individuals, organizations, and societies, in addition to collaboration with other Federal, State, local and Tribal governments. The purpose of involvement will be to familiarize the public with the LAMP process, obtain their input, exchange information, enhance common understanding of related data, identify goals and issues, and to enlist assistance in formulating long-term objectives and guidelines for management of public lands within the Bully Creek geographic cluster [landscape area]." In the first paragraph: "Full public involvement will be supported through a series of activities which may include public meetings, information mailers and brochures, distribution of the draft and final LAMP, LAMP review and comment periods, informal contacts, group meetings, field trips, written letters and responses to comments." - all of which have been or are being done.

BLM, in addition to sending written notices on scoping meetings, phoned permittees individually and asked them to attend the public scoping meeting regarding the data collection and analysis process. This meeting was well attended by permittees, in addition to many other local agency people. All permittees were invited, by letter and follow-up phone call, to participate in PFC assessments (several permittees took advantage of this opportunity). Also, all permittees were individually asked to discuss grazing schedules and other grazing issues pertinent to their allotment(s)/pasture(s) - all of which did so prior to the draft LAMP. All of their input was seriously considered, and much of it incorporated (reflected) in Appendix C - Allotment/Pasture Characterizations and Grazing Schedules.

Development of the LAMP acknowledged existing and on-going landscape or watershed-wide planning efforts within the Bully Creek landscape area. As stated in the LAMP (Sections 1.1 and 1.3), one of the purposes for the Bully Creek LAMP was to coordinate planning and project development with the Malheur-Owyhee Watershed Council (MOWC), among others. In May 1998, while in the pre-planning process, BLM representatives made a formal presentation to the MOWC involving the proposed LAMP. During the October and November, 1998, MOWC meetings, additional presentations and information on LAMP developments was provided to the council. Members of the council received letters of invitation and updates (newsletters) on the status of the LAMP during these and subsequent meetings, which included announcements and invitations to attend public scoping meetings. MOWC was represented at all public scoping meetings, and those members present actively participated in discussions involving the Bully Creek LAMP.

As stated in the LAMP (Purpose and Need Section 1.1), one of the purposes for developing the LAMP was to coordinate planning and project development with the Bully Creek Watershed Coalition, among others. During the pre-planning process of the LAMP, several existing and draft planning documents relevant to the Malheur River watershed were reviewed, and findings in those documents were incorporated into the Bully Creek LAMP. One of those documents included the Bully Creek Watershed Assessment and Strategy, which was prepared by the Bully Creek Watershed Coalition in cooperation with federal and state agencies, including the BLM, Vale District. In validation of the Bully Creek Watershed Assessment and Strategy, the LAMP adopted the goals identified in the Coalition's plan, along with the data for private lands within and adjacent to the landscape area.

Through a continuous adaptive management process, cooperation with all those having an interest in the landscape area, are encouraged to cooperate in the development of future strategies necessary to meet the goals and objectives of the LAMP.

2 - We appreciate the information. We sent for and received a copy of the SRM Glossary of Terms and after reviewing the glossary have replaced the term "ecosite" with ecological site in the LAMP. We did not see an appropriate term to replace the term "ecological condition" as we intend it to be described within the SRM Glossary. We did review our SEORMP and found that we had used the term ecological status in that document to describe what we were referring as ecological condition in the LAMP. To be consistent we have replaced ecological condition with ecological status in the LAMP. We recognize that finding an agreement of the description and usage of terms can sometimes be frustrating.

Letter 015

COMMENT

1 - We are concerned that no EIS was prepared as is required prior to the completion of the Southeast Oregon Range Management Plan EIS.

RESPONSE

1 - We believe that the significance of the environmental impacts from the proposed action were uncertain during initial scoping with the public and resource specialists. We selected to complete an Environmental Assessment to determine the significance of the impacts, so that once determined, either the EA would suffice as a decision document or a more detailed EIS would be necessary. Based on the information presented in the EA and from additional information gathered during the public comment period, we see no significant environmental impacts occurring as a result of implementing the proposed action and thus no need for an EIS.

Letter 017

COMMENT

1 - The permittee must be given the opportunity to create options to help meet your goals. The scoping process is to define the issues and possible options to address them. The members of the Bully Creek Watershed Coalition feel we were not give appropriate opportunity in the scoping process because we did not know the intent. The BLM staff already knew what increases in riparian pastures and utilization standards would mean to the permittee. These conditions were expressed in the LAMP as a requirement, when in fact these should have been open to permittee input. The scoping process for the LAMP appeared to be a public relations sales job without serious consideration of permittee input. The rules of the LAMP game were established by the BLM giving little option to the permittee. The permittees should have been given some opportunity to help develop the rules. The Bully Creek Landscape Area Management Plan should have been coordinated with the Malheur-Owyhee Watershed Council.

My view of a constructive approach would have had the Bully Creek Landscape Area Management Plan's starting point the validation and modification of the original plan written by the Bully Creek Watershed Coalition.

The Bully Creek LAMP needs to be revised so that it embraces cooperative principles and practices.

RESPONSE

Please refer to our response 1 for letter 008 in the General Comments Section.

CATEGORY 7 - Goals/Objectives

Letter 009

COMMENT

1 - The goals listed are ambitious and well founded. However, we feel they will be applied to some areas within the watershed, which cannot achieve the assigned goal. We found this to be

especially true for issue number 4: Riparian/Wetland Areas. Certainly we cannot expect all wetland areas to provide fish opportunities. Nor can we expect all watersheds in the area to support year around running water. We also cannot expect all riparian areas to respond to management techniques in the same manner. Many of the riparian areas are marginal to say the least. These areas cannot and will not respond to management, as well as areas with higher potential. We were disappointed this was not identified in the LAMP.

2 - We found Issue 6 - Wildlife Habitat to be confusing. This section did not identify the biggest problem within the LAMP area containing big game. There is a tremendous overpopulation of elk in this area. How may we ask, can we solve the most serious problem facing big game if we do not identify it.

RESPONSE

1 - We did try to explain this “potential” concern you have addressed in the second sentence under the Description part of Issue 4. We stated “Those existing perennial and intermittent streams are limited in their potential to improve due to past and current grazing practices, increased elk populations, topography, shallow soils, flash floods and low precipitation”.

To better identify the term “potential” we have added the following sentences to the introduction paragraph prior to the discussion of Issue 1 in the LAMP:

“BLM recognizes, and the public needs to be made aware, that there will be areas within the Bully Creek watershed which, due to their varying degrees of potential, may not be able to attain one or more of the stated goals. For instance all riparian/wetland areas cannot be expected to provide habitat for fish nor will all drainages be capable of supporting year around surface water. The following eight issues with their goals and descriptions address the seven broad LAMP goals described above. They are not listed in priority order”.

2 - The specific issue of elk depredation is identified in the LAMP Section 2.0, Issue 4 and Issue 6. However, Issue 6, Wildlife Habitat, was generalized due to there being several hundred species of wildlife in the LAMP area. Some species, such as elk are at all time high numbers while other species are below historic numbers. Determining the desired numbers of animals in an area is the prerogative of the Oregon Department of Fish and Wildlife (ODFW), not BLM.

Concerning the “tremendous overpopulation of elk”, BLM understands that elk are causing economic hardship on some private lands at the same time they are being encouraged to occupy other private land where they attract paying hunters. Elk are a highly desired big game species and valued by a large segment of the hunting public. They also have cultural significance to Native Americans and the general public as part of their cultural and natural heritage. We would expect an outcry from these publics should elk numbers be reduced drastically. While BLM has no authority to manage the numbers of elk, we have proposed specific and generalized habitat management actions that we believe will hold elk on public lands longer, and could ultimately

reduce elk numbers if that is the public's desire (please refer to our Response 2 to Letter 007 in the Cumulative Impact Section). However, in the short term there is little that BLM, acting alone or in cooperation with ODFW, can do to solve localized elk depredation problems until certain private landowners are willing to cooperate.

Letter 014

COMMENT

1 - The upland objectives of the BLM are determined primarily by the results within a small 3' x 3' plot and a 100' transect line. This practice does not take into account that there are many different vegetative sites within a pasture. The BLM is relying on only one very small area to establish objectives applicable to vast, diverse rangelands areas. Additionally, measurements are taken after each three or four year grazing cycle. Setting an inclusive objective applicable to all areas is unrealistic, unattainable and therefore, precluded to failure.

RESPONSE

1 - The objectives are not determined by the results of monitoring. Objectives have been established in this and previous planning activities based upon resource needs and issues of concern. Monitoring is conducted to determine if these objectives are being met under current management. The 3' X 3' permanent study/photographic plots are located to provide a record of change(trend) in specific vegetation or soil conditions. We typically place the 3' X 3' plots within the dominant vegetative communities in each pasture that we feel will give us the best data upon which to measure whether we are achieving the stated objectives.

Trend is only one of the tools we use in the evaluation of objectives. A summary of the annual actual livestock and wildlife use, vegetation utilization and climate conditions are also used to evaluate whether an objective has been met or not.

Letter 015

COMMENT

1 - We object to the changing of objectives as listed in the Grazing Schedule in Appendix C for each allotment. For example, on the Buckbrush Allotment on page C-40, the new objectives are “the long term objective is to improve ecosite condition to late seral or DRFC’s. Apply wildlife (maintain), riparian (improve) and upland (improve) objectives”. This hardly qualifies as any kind of objective since there is nothing measurable and there is no time frame for any portion. This problem exists for every allotment in Appendix C. The BLM must develop specific annual, short-term (3-5 year) and long-term (10 year) objectives for all resources on all of these.

2 - We further recommend that the BLM augment its EA to establish as an objective for each alternative the complete reestablishment of site appropriate native vegetation for every portion of these allotments which have been converted in the past to non-native perennial or annual exotic plant species.

RESPONSE

1 - We have tried to clarify time frames with the objectives in Appendix C by adding the following sentence to the end of the LAMP Objectives narrative discussion at the beginning of Appendix C:

“The time frame used to measure whether the stated objectives are being met or progressing towards will be 10 years at a minimum or until we reassess the Standards for Rangeland Health”. Please refer to our response to letter 003 in the Time Between SRH Assessments for a more detailed discussion of why we have selected 10 years as a minimum between assessments. Please also refer to Section 8 Monitoring in the LAMP which describes the monitoring efforts and strategies that will be followed. The studies listed in the Monitoring Section have both long term (upland trend and riparian trend) and annual (utilization) time frames with specific key species identified and established monitoring levels that are measurable. The annual objectives you were looking for may be provided in Table 7 of the LAMP that listed among other items, utilization limits and residual herbaceous vegetation that are to be met. Depending on the responses of the vegetation to the changes implemented, we may or may not see any change in vegetation within each pasture within the minimum 10 year time frame to indicate movement towards meeting the stated objective.

2 - It would not be appropriate to establish an objective for each alternative in the EA. Objectives have been developed in the LAMP to meet resource needs and identify goals to restore native vegetation. Complete reestablishment of native vegetation for every portion of allotments is not physically or economically possible. As required by NEPA, the alternatives in the EA are alternative management actions that may be employed and as such do not have objectives. The EA analyzes how these alternative actions affect resources and the obtainment of objectives identified in the project.

CATEGORY 8 - Grazing/Grazing Schedules

Letter 001

COMMENT

1 - Grazing should not be allowed on virtually all the area.

RESPONSE

1 - BLM allows livestock grazing within the perimeters of existing law. Please refer to our response to Letter 015 in the Socio-economics Section for further information on the Acts under which we authorize livestock grazing. We will pay particular attention to riparian habitats. In general grazing schedules have been developed to minimize impacts to vegetation communities throughout the LAMP area. BLM is required to implement the (5) Standards for Rangeland Health (SRH). Table 2 in the LAMP defines minimum resource conditions to be achieved, maintained or restored on public land. Vegetation will be managed to provide for biological diversity at the landscape level, to protect and restore native perennial and desirable non-native perennial species.

Letter 006

COMMENT

1 - Existing AMP Grazing Schedules (for the Brian Creek Allotment) show use on private land varying from one month to 150 days. Actual use on private lands has always been two months. The turnout date for proposed grazing schedule should be 4/1 instead of 4/15.

2 - The third year of the proposed spring grazing use schedule for the Brian Creek allotment is in the North and South NG Seeding through 6/30. Without some form of brush control this may not be possible.

RESPONSE

1 - The current AMP states there is a 5 month grazing allocation on this BLM allotment; the remaining 7 months of the year these livestock are supported by other sources of forage. We will change the date of the turnout to 4/1 instead of 4/15, which is consistent with management objectives in the allotment.

2 - Modification to the proposed grazing schedule may be necessary if project implementation is not completed by the 3rd year of the grazing schedule. Grazing management adjustments may occur through the adaptive management process throughout the life of the project.

Letter 007

COMMENT

1 - Concerning the EA - Section 4.9.1 Rangeland Grazing Use - Alternative A on page 22 - first two sentences. You cannot conduct PFC and turn around and make decisions about what caused some stream reaches to function and others to be at risk. PFC is not a measurement. It is merely

a way for agencies to use a common language in determining where more study should be conducted with specific questions in mind. Same paragraph - third sentence - You have failed to address the negative impacts of changing season of use as well as utilization levels. You have failed to identify “appropriate” stubble heights based on species. There is no data in this document concerning woody species used by livestock versus wildlife. There is no data in this document concerning grass species favored by livestock versus wildlife. And with no data it is also apparent that the district is desperate for facts and is making a desperate decision. No decision is superior to this one which has no focus and is only hoping for improvements.

RESPONSE

1 - PFC is used to determine if the system is functioning properly. When streams are not functioning properly, contributors to the non-functioning condition are identified with existing information and observations.

In the last paragraph in Section 4.9.1 Rangeland Grazing Use - Alternative A, we did list what we considered the negative impacts of changing season of use as well as utilization levels. We said that more stringent utilization limits may require early removal of livestock from public rangelands and that permittees may see slight increases in operation and labor costs due to the increased herding requirements. Please refer to our modifications of Table 7 in the LAMP for a discussion on “appropriate” residual herbaceous vegetation based on ungulate use and are not species specific.

Please refer to our responses in the Residual Cover and Utilization Limits Section for further information.

Letter 012

COMMENT

1 - If you choose to leave the riparian inventory as is, then grazing plans need to be changed. With a lack of summer grazing, permittees need opportunities for the early and late use. If permitted AUM's are not used April 1 to October 31, early or late use should be permitted with no restriction other than available feed. Presence of old feed in early spring should allow early turn out. October through January use should be allowed, up to proper utilization levels.

RESPONSE

1 - We agree with your comment concerning opportunities for early and late use. November through January use can be allowed up to the proper utilization level. Changes in season of use was one of the options considered in developing grazing schedules.

CATEGORY 9 - Key Forage Concept and Key Area Concept

Letter 008

COMMENT

1 - As BLM moves toward more management intensive grazing, recognize that the key forage plant and key area concept become much less applicable and in fact are out-moded. Range readiness concept as shown in Table 11, A-24, is a crutch for good management judgement. Whenever possible, abandoning it in favor of more modern approaches will achieve agreed upon objectives more clearly and, I believe, sooner. I have always been concerned regarding the location of the 3 by 3 plots and the apparent reliance on so few per pasture in order to make assessments and evaluations. I expect you folks feel the same way. The level of sampling is so small that it is easy to make gross errors unless one rides the whole area and has convergent evidence of the same indications.

RESPONSE

1 - We share your same concerns about the key forage plant and key area concepts and the level of sampling. We believe most key vegetation plots/study areas have been located in pastures where they show changes in trend, either upward or downward, that reflects the general change throughout the pasture. We agree that one has to have convergent evidence of the same indications to avoid making gross errors. We rely heavily on the experience of our staff and the permittee's history in the area. A few BLM personnel making the 1998 assessments were the same specialists who originally established some of the trend plots in collaboration with former permittees and have a history with the area.

Our analysis process involved the review of all allotment evaluations and vegetation studies including photo points, trend, canopy and basal cover, actual use and utilization records beginning as far back as 1969 to present. Old allotment objectives and associated grazing systems were also compared to the current ones to see if progress had been made toward meeting the objectives. We look forward to more modern approaches for range management but at the same time we need to use the historical data available to make the best assessments until new approaches have become established.

CATEGORY 10 - Juniper Encroachment

Letter 004

COMMENT

1 - I am concerned with the apparent failure of the Bully Creek LAMP to recognize the significance of the juniper encroachment problem. Juniper encroachment is seriously impacting stream and upland spring flows and deteriorating wildlife habitat.

RESPONSE

1 - Juniper encroachment was recognized, through a series of public scoping meetings, as one of eight issues identified and addressed in the LAMP. The stated goal is to: Reduce juniper in areas where it has expanded beyond pre-suppression distribution. Juniper encroachment is a serious problem in the Bully Creek subbasin but the solution is complex due to ecological and economic problems. As you know, control can be obtained by the use of herbicides, mechanical equipment, and prescribed fire depending on the situation present and desired outcome. Economical considerations are based on the cost per acre treated, the effective rate of juniper killed per method and the exclusion of livestock grazing for a minimum of two growing seasons to allow grasses and forbs to recover.

The 1998 inventory identified many pastures with juniper encroachment exists and this data has been added to Appendix C of the LAMP. Please also refer to Appendix A, Table 9 for a list of juniper control projects.

BLM will continue to work with livestock operators and other interested parties to design additional juniper controls within the scope of this project. It is our intention over time and within the life of this project to treat most areas of juniper encroachment.

Letter 007

COMMENT

1 - Concerning Issue #7 on page 12. Why would the cost of juniper control be more complicated than other projects as stated in the Description? You also state "Removal often results in increased weed invasion and erosion potential following fire, mechanical control or chemical application". How is this a concern over and above the project proposals in Appendix C that offer burning and seeding acres of rangelands and aspen rejuvenation using prescribed fire?

RESPONSE

1 - Please refer to our response to letter 004 in this section.

Letter 009

COMMENT

1 - We find issue #7 - Juniper Invasion - to be lacking. We feel juniper invasion is the biggest threat to not only the LAMP area, but to much of the Vale District.

RESPONSE

1 - Please refer to our response to letter 004 in this section.

Letter 018

COMMENT

1 - The Bully Creek LAMP should be revised to estimate the present state of environmental degradation due to juniper expansion and clearly state the pending problems of stream desiccation that will probably follow in future decades.

RESPONSE

1 - Please refer to our response to letter 004 in this section.

CATEGORY 11 - Project Maintenance

Letter 015

COMMENT

1 - We request to know what party has maintenance responsibility on the huge list of so-called existing projects in the landscape area catalogued in Table 9 on page A-11. The condition assessment abbreviation for all of these installations is never keyed anywhere that we can locate in the LAMP. What does "CA, NI" mean? In addition, the BLM does not identify the condition of the landscape area and its resources where these projects occur. For example, many of these projects are related to springs. Yet there is no indication as to whether these springs are fenced or unfenced or whether they are in proper functioning condition as required by 43CFR 4180. Please provide this information.

2 - We expect the BLM as part of this decision to assign maintenance responsibility for all installations relating to any aspect of livestock management or control on these allotments to the sole beneficiaries, the permittees.

RESPONSE

1 and 2 - In accordance with BLM policy, maintenance responsibility for all range improvement projects that were in usable condition have been assigned to the benefitting permittees. New projects and projects that were subsequently brought up to useable condition have also been assigned to benefitting permittees for maintenance. Maintenance responsibility for future projects will be assigned according to policy in effect at the time of construction.

We apologize for the lack of a key for Table 7 in Appendix A. A key has been added at the end of this Table as a reference.

The condition of the landscape area is found in Appendix C by allotment and pasture which can also be correlated to the existing projects in Table 7 which are also listed by allotment. This should give you an indication of the condition of each allotment by pasture and the projects located within that same allotment. We do not have information on all the springs in the LAMP area but will continue to gather this information during our scheduled maintenance inspections.

CATEGORY 12 - Rangeland Vegetation Improvements

Letter 015

COMMENT

1 - We are opposed to any management action which would result in the burning of sagebrush or juniper communities in order to increase forage for livestock. In addition, there is no need shown whatsoever for such projects as “brush beating” and new crested wheatgrass seedings. Such seedings create a monoculture wasteland of negligible biodiversity which severely handicaps the continued existence of native plant and animal communities of this sage/steppe ecosystem.

RESPONSE

1 - Prescribed burning is proposed in 6 pastures, which will affect many resources and provide benefits for several uses of the public lands. Pastures identified for burning have rapidly

increasing juniper cover that is likely affecting sage grouse brood rearing habitat, as well as decadent aspen stands that should be rejuvenated by burning. Livestock forage production also is below potential due to competition from sagebrush and juniper. In these pastures livestock probably are shifting their use from upland to riparian areas as a result of decreasing forage. A mosaic of fire through the sage/juniper community should increase livestock forage production (after a minimum of 2 growing seasons rest) in addition to improving forage for elk, deer and pronghorn, while it reduces the hunting perches of raptors and increases meadow openings for foraging sage grouse. BLM will closely monitor livestock use, and work with ODFW on numbers of deer, antelope and elk to maintain sufficient cover and a forage mix abundant in forbs for sage grouse. However, livestock are one of the 7 uses identified by FLPMA as part of multiple use, and BLM manages under the mandate of multiple use.

Seven crested wheatgrass seedings were identified for brush beating treatments, with a mix of crested wheatgrass and forbs planted in the treated areas. Seedings proposed for treatment were selected due to the abundance of other winter habitat for wildlife in adjacent pastures and the high potential for successful reseeding. The mosaic pattern was identified to retain connectivity for wildlife movement and the addition of native forbs was identified due to the lack of community diversity for wildlife, usually sage grouse and/or pronghorn. We selected crested wheatgrass as the perennial grass for this effort due to its competitive ability in lower elevation areas currently dominated by exotic annual grasses and the vulnerability of these pastures to noxious weeds. We agree with your statement about the negative impacts of crested wheatgrass monocultures and are proposing management to retain shrubs and increase forbs. The increase in crested wheatgrass production in seedings should allow some livestock use to be shifted from native rangelands and riparian areas to these seedings, while retaining or improving some components of wildlife habitat. We proposed using native grasses and forbs in four pastures dominated by exotic annual plants due to soils and precipitation conditions that make reestablishing a native community possible.

CATEGORY 13 - Recreation and Visual Resources

Letter 007

COMMENT

1 - Concerning Section 4.10.1 in the EA on page 23 - first two sentences in this section. How have you determined that it (additional fence placement) will be insignificant? In the second paragraph in this section - first three sentences - Define short-term and long-term. Do you have a survey available to support what impact a burn has on recreational values? Concerning the last half of this same second paragraph - Do you have a survey available to support what impact seedings have on recreational values? How are aspen stands figured into recreational values?

RESPONSE

1 - The determination that additional fence placement will be insignificant was based on the location of the proposed fences and anticipated impacts. For example, none of the fences will be constructed across riparian zones. Most fences will be located on ridge tops or at least one quarter of a mile from the riparian zones. A few fences may be temporarily placed near riparian zones but will be removed once the riparian objectives are met. Short-term, for this analysis, is 0-5 years in length and long-term is 20 years and longer.

At this time, the BLM does not have a survey that studies the impact of burning or seedings on recreational values. We base our conclusions on the professional judgement and the experience of the Malheur Resource Area specialists.

Aspen stands are figured into recreational values due to the correlation of dispersed camping being concentrated in riparian areas which contain aspen trees. The public also enjoys recreational opportunities such as hunting, photography and wildlife viewing within aspen stands and these direct correlations are how we tied aspen stands to recreational values. However, lack of fire and overgrazing has created a downward trend of aspen recruitment in some pastures. This deterioration of aspen health thus would directly affect the quality of the recreational experience and recreational values.

CATEGORY 14 - Riparian/Wetland Areas

Letter 007

COMMENT

1 - Concerning Issue #4 on page 11. The existing perennial and intermittent streams are limited by the site capability but not necessarily because of any grazing practices or wildlife populations. Site potential is limited to natural factors such as topography, soils, climatic factors such as precipitation. The LAMP should not confuse land characteristics with activities on the land.

2 - The geographic location of the Bully Creek sub-basin limits the premise of a PFC. If that factor was never considered when the PFC was conducted, it is absurd to suggest livestock grazing impeded the stream reach vegetation. A proper PFC would recognize the soil and stream type as being the limiting factor.

3 - To establish goals to improve, filter sediments, and provide greater biodiversity will require establishing what percent increase is desired over the current levels? Where are these numbers?

4 - In the EA for the Bully Creek Lamp, Section 4.4.1.2 Impacts to Riparian Vegetation, last paragraph on page 10 and first paragraph on page 11 of the EA you state “ The rate of recovery of riparian function would be greatest where livestock grazing practices are currently limiting functionality”. As we have stated before, there is no tie to grazing practices when using riparian function as assessed

using the methodologies described in this document. You do not have the data to support these claims and continued reference to grazing practices based on subjective opinions is unprofessional and lacks credibility. Please re-write the first and second sentences of paragraph one on page 11. Considering the factors which may limit the attainment of the riparian function includes a lot of factors as listed, but influences from private land should not be mentioned. Also you do not have data to support your notions about historical livestock management practices and whether it downcut or built up hydraulic processes.

5 - Concerning the last two sentences of the first paragraph on page 11 of the EA - You have not provided any data nor hydraulic analysis to indicate that you had studied the processes described here. Are you basing this on a model of the sites? Please include the data or delete this from the assessment.

RESPONSE

1 -The intent of Issue #4 is to indicate reasons why improvement in riparian areas may be limited. There might be some confusion on capability vs. potential. In the PFC handbook (TR-1737-9) definitions are as follows:

Capability - The highest ecological status a riparian-wetland area can attain given political, social, or economical constraints. These constraints are often referred to as limiting factors.

Potential - The highest ecological status a riparian-wetland area can attain given no political, social, or economical constraints. Often referred to as the “potential natural community” (PNC).

Some riparian-wetland areas may be prevented from achieving their potential because of limiting factors such as human activities. Most of these limiting factors can be rectified through proper management. However, some limiting factors such as dams or diversions can result in a riparian-wetland area’s flow regime being altered, thus changing the area’s capability. PFC is assessed in relationship to the area’s capability. This section will be reworded to reflect what is stated in the PFC handbook (TR-1737-9); “Some riparian-wetland areas may be prevented from achieving their potential because of limiting factors such as human activities.”

2 - Factors and methodologies to be followed when completing PFC assessments are outlined in BLM technical reference TR-1737-9. The PFC assessments were used to determine if riparian areas within the Bully Creek landscape area were meeting SRH Standard #2. The SRH required that assessments be made to identify why riparian areas were not meeting proper functioning condition including the influence made by livestock. In addition, please see the response to comment 1 in this section.

3 - BLM uses the Properly Functioning Assessment Method for riparian areas (TR 1737-9) in the recognition that properly functioning condition is essential to meeting or attaining DRFC (Desired Range of Future Condition). PFC is a qualitative assessment to determine how well the physical processes are functioning and is the minimum standard we expect to achieve.

BLM's objective with Issue #4 (Riparian/Wetland Areas) is to ensure streams are in properly functioning condition and moving towards the DRFC. We have completed an assessment of PFC on a total of 210 miles of stream riparian vegetation communities adjacent to perennial and intermittent streams within the Bully Creek Landscape Area. At this time, we have identified 35 miles of the streams in the landscape area that are functional-at-risk with a downward trend, 57 miles functioning-at-risk with no apparent trend and 21 miles of stream that are non-functioning. These are the areas we feel can be improved and/or stabilized in their vegetative, hydrologic or soils/erosion characteristics resulting in an improvement in water quality, filter sediments, etc. providing for a greater biodiversity. These numbers were identified in Section 6.0 of the LAMP under Results of Data Analysis.

4 - Text in the EA was edited to read "Factors which may limit the attainment of riparian function and the progress of meeting riparian objectives include, but are not limited to, road placement and maintenance, stream flow affected by upstream reservoirs, livestock grazing, upstream or downstream influences from private land, or juniper encroachment into riparian and upland vegetation communities. Riparian areas in proper functioning condition and functioning at risk with an upward trend would remain functioning with the proposed action. The riparian areas with a functioning at risk not apparent trend and some of those with a downward trend would improve with the proposed grazing changes if current grazing is identified as the sole limiting factor. Where more than current grazing is a factor contributing to the degraded condition of the riparian area, improvement may not be possible with the proposed changes. Many incised stream reaches in non-functioning condition or functioning at risk with a downward trend would continue to degrade as a result of the continuation of hydrologic processes, regardless of the proposed action. These stream reaches would improve in condition once hydraulic processes establish a new floodplain at the entrenched elevation. The time frame for improvement with dissipation of the energy within the stream and rebuilding of a floodplain may be in excess of 20 to 50 years. Some of the non-functioning riparian areas might not have the potential to improve due to loss of all hydrologic controls, vegetative factors, and/or stream channel characteristics. Implementation of the proposed action would be an opportunity to observe improvement in areas still retaining the potential to attain properly functioning condition."

5 - The paragraph was revised to address the concerns in this comment. Refer to #4 (above)

Letter 009

COMMENT

1 - Problems associated with improving riparian vegetation other than livestock grazing are not fully addressed. Factors such as wildlife use and presence of weedy species can have profound impacts on the rate, extent, and direction of recovery.

RESPONSE

1 - In the LAMP under Issue 4 (Riparian/Wetland Areas) and the description of the issue we identified other problems besides grazing practices such as increased elk problems, topography, shallow soils, flash floods and low precipitation which can limit the potential of riparian areas to improve. We also identified in Table 7 of the LAMP those general management actions available to resolve issues identified during the public scoping process that would also meet LAMP objectives. Many of these management actions focused on livestock grazing but juniper control, weed control and the use of prescribed fire were also discussed. As a result of the comments we received we have also revised the Juniper Encroachment and Weed Management Sections of the LAMP to better reflect their impacts to the riparian vegetation community. Please refer to our response to letter 004 in the Juniper Encroachment section and letter 018 in the Weeds section.

Letter 010

COMMENT

1 - My contention is that your riparian surveyors erred in assessing current riparian vegetative communities by not having a concept of site potential. See the attached definitions and process for determining site potential and completing monitoring studies for suggestions.

RESPONSE

1 - Please refer to our response to comment 2 from Letter 007 in this section.

Pre-work for PFC assessments included reviewing all available information regarding stream reaches surveyed. This information ranged from site descriptions, ground photos, aerial photos, grazing case files, local knowledge, etc.

Letter 012

COMMENT

1 - My main concern is the additional riparian areas that were identified. The number of riparian pastures in the Bully Creek area was nearly doubled. Many marginal areas were added that do not run water year around. These areas have very low potential for improvement. A good example of this is the NG creek exclosure. After being fenced for 25 years this area was shown to be in a downward trend with a lack of large and old woody species. This area does not have year around water and will not support the growth and diversity of species like areas with constant water sources. Most of the areas with riparian potential are already being managed. These new riparian areas were identified in 1998, one of the wettest years on record. On average to low precipitation years no water will be found in many of these areas after spring runoff.

RESPONSE

1 - The 1998 survey updated riparian areas in pastures that were previously not realized for the potential of supporting riparian vegetation. The Bureau wide definition of riparian areas as defined in Tech. Manual 1737-9 is “a form of wetland transition between permanently saturated wetlands and upland areas. These areas exhibit vegetation or physical characteristics reflective of permanent surface or subsurface water influence. Lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.” The NG Creek Exclosure was not be used as a good reference exclosure due to historical grazing trespass that has occurred historically.

Letter 015

COMMENT

1 - We object to the LAMP’s failure to assess the functioning condition of riparian/wetland areas as required under Standards for Rangeland Health 2. Since surveys of plant communities are not current or are unavailable, how will this measurement standard be evaluated and objectives designed for improvement?

2 - We also note that in Table 7 on page 34 of the LAMP that the BLM does not define the word “riparian” in regard to the 6 inch stubble height and the 20% use of current year’s woody browse. In discussions with Manager Masinton, we believe this to mean all riparian areas including intermittent and perennial creeks, as well as seeps, springs, bogs, wet meadows, and certain aspen groves located in riparian habitat and hydric or mesic soil areas. Please clarify what is meant in this case.

3 - It is also unclear from Table 7 whether the riparian utilization and stubble height requirement

applies at all times or just in the hot season and late season use. Does this mean that earlier season use can result in heavy to severe livestock utilization such as less than 1" stubble height on such invader species as Kentucky bluegrass?

RESPONSE

1 - BLM did assess the functioning condition of riparian/wetland areas as required under SRH 2. The assessment was done to identify the limiting factors to riparian areas as described in Tech. Manual 1737-9. To determine conformance to Standards for Rangeland Health 2 Riparian Area Function was assessed by using the PFC data and information as described in "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington". The PFC data is summarized by allotment and pasture in Appendix C.

2 - This comment is correct. We have made no attempt to differentiate between types of riparian habitats. The SRH 2 applies to all riparian areas and it is BLM's intent to protect, maintain or, where necessary, improve these areas during the life of this project. Table 7 has been amended to better define how utilization limitations will apply. For a definition of riparian, please refer to our response 1 from letter 012 in this section.

3 - Please refer to our changes to Table 7 in the LAMP that describe how utilization limitations will apply.

Letter 017

COMMENT

1 - The riparian pasture changes appear to occur only within the local Vale BLM office and not elsewhere. When did the definition change to require so many new pastures to become riparian?

RESPONSE

1 - Please refer to our comment #1 from letter 012. The 1998 survey updated riparian areas in pastures that were previously unknown.

CATEGORY 15 - Soils

Letter 007

COMMENT

1 - Under the Environmental Consequences Section of the EA - Soils 4.3.1 - Alternative A - first sentence. No one knows if the sites met Standard 1 or not due to insufficient verifiable data. No one made measurements about infiltration and permeability rates or moisture storage or stability. Leave this out or get some data and re-write this section.

RESPONSE

1 - BLM completed an assessment of Standard 1 using soil surface factors which is a qualitative assessment described in “Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington”. This data was then used to determine if Standard 1 had been made and is recorded in Appendix C. This data is also available for review at the BLM Vale District Office.

CATEGORY 16 - Special Status Animal and Plant Species Habitat

Letter 015

COMMENT

1 - Idaho Watershed Projects objects to the lack of information regarding special status plant species and endangered and threatened animals. Page 17 of the LAMP details that “few comprehensive plant inventories have been conducted in the landscape area”. Table A-6 on page A-8 provides a list of special status animal which are “likely to exist” in the landscape and fails to detail the location and condition of available habitat.

RESPONSE

1 - Detailed information on special status wildlife is beyond the scope of this project. Where listed or Bureau sensitive species were affected by grazing systems and proposed projects, impacts were analyzed in the EA.

CATEGORY 17 - Residual Cover and Utilization Limits

Letter 004

COMMENT

1 - The Bureau's heavy reliance on use limits may be politically correct but is technically wrong. The range management science community is largely on record in opposition to this simplistic and artificial approach as being bad science. Utilization standards are not an appropriate substitute for on-the-ground management combined with objective monitoring of resource trends. Application of conservative conservation limits in riparian zones would effectively preclude any grazing on the uplands. Management approaches should involve cool season or early grazing and hot season rest, rotation, upland water developments and herding.

RESPONSE

1 - The assertion that the range management scientific community opposes the use of utilization standards is simply not supported by the technical literature. Most recently Holechek, et.al.(1999) made an extensive search of the literature and found the following "The primary measure of grazing intensity used in long-term grazing studies has been percent of use of palatable forage species. Although it has limitations as a measure of grazing intensity, percent use is more easily understood by ranchers and non-range professionals than other measures... When several years of data were collected, percent use of forage has been well related to changes in productivity of primary forage plants, livestock performance and financial returns." In addition, the Bureau's use of utilization studies is constant with the Interagency Technical Reference "Utilization Studies and Residual Measurement - 1996".

We would agree that utilization standards are not a substitute for on the ground management combined with objective monitoring. On the ground management approaches developed and applied in the LAMP (Table 7) include cool season or early season grazing, hot season rest, rotation, upland water development and herding. Utilization guidelines outlined in the LAMP are intended to work with those grazing schemes to allow for needed maintenance or improvement of resource conditions. Upland standards allow for leaving residual vegetative material for other uses such as wildlife habitat needs, watershed protection and protection of soil resources.

BLM relies on several monitoring and management tools, including utilization, for managing pastures with riparian vegetation. Where possible, riparian pastures were scheduled for cool season grazing throughout the subbasin. However several allotments did not have sufficient upland pastures to allow early season use every year in every riparian pasture. Therefore, we developed grazing schedules with mid or late season riparian grazing rather than not allow grazing in some riparian pastures some years. In these cases, we spent time with the allottees discussing the need for herding, salting, upland waters and potentially additional fences or prescribed burns to help reduce riparian use. Please refer to Appendix A, Table A-7 for a list of existing projects designed to help manage cattle distribution.

As a fall-back management tool we have proposed utilization guidelines to help riparian areas recover where they are at risk or non-functioning while allowing livestock grazing to continue. Our 1998 inventory located riparian areas with late season use that were properly functioning,

and in these pastures we do not believe utilization guidelines are necessary as long as the systems remain properly functioning. We recognize that the amount of upland grazing in riparian pastures that will occur under the proposed strategy will be directly related to the effort the allottees makes to push cattle out of the riparian areas, and disagree with your assertion that... “Application of conservative conservation limits in riparian zones will effectively preclude any grazing on the uplands”. While this alternative may be as described, we believe many ranchers will choose to cooperate, work hard, and achieve the requirements established by the Standards for Rangeland Health.

Letter 007

COMMENT

1 - Concerning Herbaceous Studies on page 41 - The decision for 40%, 50%, and/or stubble height utilization has no basis. Document the benefits to the grass species and cite the grass physiology literature that could make these recommendations.

RESPONSE

1 - This section was condensed and poorly explained for what we intended to do and it has been rewritten. It should have referred to Tables 7, 9 and A-11 of the draft LAMP. The information in these tables has been combined into Table 7 of the Final LAMP document. Because the BLM manages for multiple use of public lands, not all actions are for the benefit of livestock grazing nor do they always reflect the minimum foliage necessary for healthy plant physiology. Some residual covers were designed for nesting cover for sage grouse or for hydrological roughness to reduce stream velocity and capture silt. Maximum allowable utilization levels were established in our past land management documents such as the Ironsides Grazing Management EIS signed in 1980. The following literature also supports the 40%, 50% and/or stubble height utilization: Holechek et. al. 1999 and 1997, Heitschmidt et. al. 1990, Taylor et. al. 1993, and Stoddard et. al. 1975. References are listed in the LAMP: Literature Cited.

The sage grouse use limit of 40% was established to reflect the amount of livestock use that could occur in pastures grazed after seed ripe where sage grouse are believed to be nesting. This amount of use in a pasture reflects the typical placement of utilization studies in relation to water and roads such that approximately half a pasture would contain areas with 7-9" of perennial grass stubble available for nesting grouse the following spring. In pastures grazed early, when soil moisture will allow total regrowth of grasses after cattle are removed, the utilization guidelines on upland vegetation is less important than keeping livestock density low around leks and to minimize the disturbance to incubating hens. We have developed these use limits and residual covers based on the following recommendations/literature: Braun C.E. 1998; Call, M.W. and C. Maser. 1985; DeLong, A.K., J.A. Crawford, and D.C. DeLong. 1995; Drut, M.S., J.A. Crawford, and M.A. Gregg, 1994; Hanf, J.M., P.A. Schmidt, and E.B. Groshens, 1994; Martin, N.S. 1990;

Oregon Dept. of Fish and Wildlife, 1993; Pyle, W.H. and J.A. Crawford, 1996; Wakkinen, W.L., K.P. Reese, and J.W. Connelly, 1992; Wallestad, R.O. and D.B. Pyrah, 1974; and Welsh, B.L., F.J. Wagstaff, and J.A. Roberson, 1991. References are listed in the LAMP: Literature Cited.

Letter 008

COMMENT

1 - I am also concerned about BLM's continued reliance on forage utilization levels as exemplified in Table 7, page 34.

RESPONSE

1 - Please refer to our response 1 to letter 004 in this section.

Letter 009

COMMENT

1 - Right now you have a group of permittees very willing to work with you. However, the unnecessarily restrictive utilization limits as shown in Table 7, page 34 will not allow us to maintain a viable economic unit. There is no data to indicate these limits are required to attain the stated objectives in the proposed action. Utilization is the amount of annual (aboveground) plant growth which is removed by grazing animals. This measurement must be done at the end of the growing season to get an accurate reading. Our recommendation for utilization studies as a management tool are:

1. 60% within allotments managed under a grazing system
2. 50% within allotments with season long grazing
3. Measure utilization only at the end of the growing season
4. Take measurements at least 200 feet from roads and 1,000 feet from water, including riparian/wetland areas.
5. Conduct utilization studies which result in "use pattern maps" where patterns of utilization are drawn on a map. (This would replace the key area method where one or more spots are picked to represent the entire pasture).

We do not feel it necessary to locate key areas for utilization studies in riparian areas when the grazing system is designed to mitigate grazing impacts on riparian vegetation. We do not find it important to review utilization levels in riparian areas identified in Table 7, page 34 of the Bully Creek LAMP. A more reasonable and attainable use level is: that 10-15 cm. (1 cm = 0.39 inches)

of forage residual cover should remain on stream side areas at the end of the growing season, or at the end of the grazing season after fall frost (Clary and Webster, 1989, 1990).

RESPONSE

1 - We believe that several laws and policies make it necessary to recognize riparian areas as the key area on many pastures due to high values for recreation, cultural, vegetation, wildlife, water quality and livestock forage. We have combined Tables 7, 9 and A-11 into a new LAMP Table 7 to reflect different residual herbaceous vegetation heights based on the specific riparian resources at risk, and current condition or trend. We have modified the text to identify the need for native riparian species over exotic riparian obligates that provide less bank protection. We note that the 10-15 cm residual cover (Clary and Webster 1989, Clary and Medin, 1990) is equivalent to 3.9 to 5.85" and we simplified those values to be 4-6 inches. Our intention was to measure residual herbaceous vegetation at the end of each growing or grazing season to insure there would be sufficient stubble for spring run off protection. We would periodically monitor the riparian and upland areas to determine whether or not the LAMP objectives are being met. Please also refer to our response 1 to letter 004 in this section for further information.

Letter 015

COMMENT

1 -We object to the lack of specificity in the 50% utilization limitation on “upland/native” vegetation in all pastures of the allotments. We are opposed to any grazing use on native perennial bunchgrasses in the rapid phase of growth between the boot and flower life stages of these plant species. The BLM must also make clear whether the 50% annual utilization term and condition applies to use solely by livestock or includes use by native grazing ungulates.

RESPONSE

1 - We are unsure of your concern on specificity in the 50% utilization limitation. The 50% utilization level is specific. We do not understand your concern for grazing native perennial bunch grasses during the rapid growth stage but all the identified grazing systems have been developed with this and other plant physiological considerations in mind. The impacts of livestock grazing on vegetation are related to the season, intensity and duration of use in a given year. With this in mind most of the grazing schedules rotate the season of use so that grazing on vegetation doesn't occur consistently during the rapid growth stage. These rest or deferment stages allow for the vegetation to meet all of it's physiological needs during the majority of years the grazing schedule is established for. The 50% utilization guideline includes all grazing ungulates. We have added this sentence to the introduction narrative to Table 7 for clarification.

CATEGORY 18 - Time Between SRH Assessments

Letter 003

COMMENT

1 - SRH assessments should be conducted every 3 years instead of the 10 recommended. Upland trend assessments should be made every 5 years and riparian trend assessments every 3 years.

RESPONSE

1 - We have chosen a 10 year minimum cycle for completing SRH assessment work (including reevaluation of upland and riparian trend) based on the 9 geographic areas (based on watershed boundaries) that have been identified within the resource area and our requirement to complete the SRH assessments on all these areas within 10 years. We have prioritized the 9 areas based on the resource issues within each area and will be completing the assessments from the highest priority (Bully Creek) to the lowest (Willow Creek). With current staffing and funding we are committed to the 10 year minimum schedule between SRH assessments.

This does not state that we will be ignoring these areas between the 10 year time frame. We believe our annual monitoring, including completion of utilization studies and compliance inspections, will be critical for the recovery of degraded riparian and upland areas.

We have deleted the last sentence in the Monitoring Section of the LAMP and added the following sentences for clarification: “To complete the Adaptive Management Cycle, if degraded riparian areas, for example, aren’t showing progress towards meeting the desired range of future condition for the site, adjustments will be made as per Table 7 (Resource Management Actions) which includes a wide array of options from land improvement to reduction or suspension of AUM’s. We will be relying heavily on annual monitoring with progress reviews of each LAMP scheduled for 3, 5, and 7 year intervals after the final decision is signed”.

Letter 015

COMMENT

1 - We are concerned that the 10 year time period planned for expected improvements in range condition and watershed health is inadequate in light of current levels of degradation. It is frivolous to ignore the immediate need for active policies to reverse historic damage and begin to heal fragile ecosystems. We suggest that measurable annual standards and accountability for failure to meet these standards be made a part of any final management objectives as well as 3, 5,

and 7-year objectives for recovery of degraded riparian areas such as intermittent and perennial creeks, springs, seeps, wet meadows, and aspen groves.

RESPONSE

1 - Please refer to our response 1 to letter 003 in this section.

CATEGORY 19 - Vegetation Composition, Structure, Diversity and Productivity

Letter 007

COMMENT

1 - Concerning Issue #2 on page 10. It is doubtful anyone has actually made an assessment of this issue. Re-write the goal. To restore, maintain or improve the diversity and distribution is stating no more that BLM is doing now. Will BLM maintain what is there or is there intentions to make something better?

In the EA under the Section 4.4 Vegetation and 4.4.1.1 Impacts to Upland Vegetation - first and second sentences. Please provide support to indicate that the district can show a difference (quantified) between utilization on deferred pastures and current use. There is no data provided that indicates that the grazing has impeded the natural growth of the plants. The last sentence in the first paragraph on page 10 of the EA says Little change in vegetation composition would be expected. This document fails to recognize the value of using livestock grazing to manage annual species. What are the “types of vegetation manipulation” that are being referred to here?

RESPONSE

1 - Depending on the diversity, distribution and abundance of native plant species, BLM’s goal is to restore, maintain or improve the community in order to meet Standards for Rangeland Health and thus will involve making some vegetation communities “better”. This is clearly stated as the Goal for Issue #2.

We have provided the following references pertaining to grazing and vegetation responses. They are:

Armour, C.L., et al., 1991; Chaney, E., W., et al., 1990; Odum, E.P. 1981.; Platts, W.W. 1989 and 1991; U.S. Department of Interior. 1991. References are listed in the LAMP: Literature Cited.

We do recognize the value of using grazing to manage annual species and have stated this in

Table 9 in the LAMP-Management Actions. Depending on the plant species present, grazing may not be the best “tool”. Types of vegetation manipulation would include prescribed fire, plowing and herbicides.

Letter 011

COMMENT

1 - On Cottonwood Mountain, the report in Appendix C said “downward trend” That is not true. The range, trees, and riparian areas have been improving since the last drought.

RESPONSE

1 - The BLM has three trend plots located in Allotment #2 Mountain pasture. Two of the three plots located in the pasture indicate a downward trend in key species, and an increase in sagebrush and rabbitbrush.

Letter 014

COMMENT

1 - The BLM is assuming that the upland vegetation is going to change or improve to meet preconceived standards such as Standards for Rangeland Health (old Soil Conservation Service) site guides that describe early, middle and late ecological conditions. Research supports the contention that the BLM’s objectives may not be attainable. Examples are presented in this letter.

RESPONSE

1 -Past objectives for much of the LAMP area were to make improvements in ecological condition classes in relatively short (10-15 years) time frames which are probably not realistic. The LAMP has modified those old objectives to be consistent with current thinking and guidelines in the Southeastern Oregon Resource Management Plan and has been expressed as Desired Range of Future Conditions (DRFC’s). The LAMP recognizes that reaching DRFC’s may take 50-100 years and that livestock is not always the limiting factor in reaching those

objectives. The Standards of Rangeland Health are not specifically tied to old Soil Conservation Service site guides that describe early, middle and late ecological conditions. As required by the grazing regulations 43 CFR 4180, the standards (Table 2) were developed by the Southeastern Oregon Resource Advisory Council and identify minimum resource conditions to be achieved based upon site potential to be obtained by public rangelands. The LAMP recognizes that livestock grazing is not always the limiting factor in attainment of these standards.

Letter 015

COMMENT

1 - The emphasis on seeding non-native species such as crested wheatgrass in order to facilitate continued livestock grazing fails to give priority to native species' habitat needs.

RESPONSE

1 - Objectives and management actions in the LAMP do not place emphasis on seeding non-native species to facilitate livestock grazing. Identified goals and objectives are to restore and improve native vegetative communities. Management actions identified include seeding with native species. Seeding with non-native species may be employed where native species would not be successful.

Letter 018

COMMENT

1 - The Bully Creek LAMP should be edited so that it is clearly tied to the established USDA guidelines on range site potentials.

RESPONSE

1 - We are several years from getting this valuable information. Fortunately, the adaptive management process, which provides the cornerstone for the Bully Creek LAMP, will allow incorporation of this information when it is available.

CATEGORY 20 - Water Quality/Quantity/Watersheds

Letter 007

COMMENT

1 - Concerning Issue #1 on page 9. Stating that BLM manages streams where water quality doesn't meet Oregon's standards fails to describe the issues of the Bully Creek sub-basin. This needs to be re-written with a better description of precisely what the focus will be for the LAMP.

2 - BLM data and inventories do not describe the Bully Creek Watershed in terms of the natural expected pH and dissolved oxygen levels necessary to support the aquatic system. Without incorporation of "natural" variations inherent in the specific system, achieving the goals described above is impossible. Further, until the issue is re-written and better defined, one can't tell if BLM is describing the Bully Creek sub-basin or a basin located in another state and geographic region.

3 - Comment from Characterization of the Landscape - Water Quality - page 20. Sparse data from the landscape area suggests that little should be planned for restoration and/or improvement until the extent of the problem is understood. At present little is known about how to access "non-point pollution" problems. BLM assumes much in this discussion when in actuality no one knows. What are the economic benefits of habitat restoration for improved water quality? What streams in Oregon have been shown to have improved water quality due to the actions by federal agencies?

4 - Define severe in the sentence "Severe water quality, resulting from non-point source pollution, has been identified....." on page 20. If there is sparse data for the landscape area how do you end up using a descriptor such as severe water quality? The Oregon Statewide Assessment of Non-point Sources of Water Pollution Report, 1988 has no validity to determine what the Bully Creek sub-basin's non-point pollution is since it did not cover that area using data collected with any type of protocol. What does the BLM data describe? With only two streams even being identified for any of the state parameters this is a subjective statement. How do you justify using insufficient data to include all streams? The state-wide assessment is over 10 years old and not relevant to current conditions.

5 - Comment on Table 4 - page 20. Since this table merely represents BLM's speculations about causes and no data exists to support the statements in this chart it should be DELETED. DELETE all references to actions and decisions concerning water temperature as well as sediments. There is no data in your file to allow any decision regarding either parameter.

6 - Comment on the EA - page 17 - Hydrology and Water Quality - second paragraph - first sentence. This is just more speculation. So little information is available on the district concerning water quality that there cannot be a decision about the impacts on water with the

proposed action.

7 - Concerning the rest of the second paragraph - If the agency actions contribute to any erosion or sediment transport then plans should be presented to measure the impact. Or are you intending to subjectively decide the impacts as they happen in order to avoid being accountable? What is meant here by “short-term and long-term”? How much impact will the fencing cause to erosion/What vegetation treatments will increase herbaceous shrub and tree species? Do you have predictions on the success rates of planting? In many watersheds in Oregon plantings have had to be repeated 2 and 3 times in order to have a survival rate above 10%. How much are you depending on vegetation plantings to justify this part of the decision?

8 - Comment on the third paragraph of the EA on page 17 under Hydrology and Water Quality. How much impact do these (major access roads) have? Are you monitoring? How much sediment is being contributed by these items?

RESPONSE

1 - Issue 1 has been rewritten as follows: “BLM currently manages stream segments within the Bully Creek subbasin that aren’t meeting the State of Oregon’s Water Quality standards which have been developed to comply with the Clean Water Act. Not meeting these standards impacts the beneficial uses identified for the Bully Creek subbasin including water quality, fisheries, aquatic habitat, and water contact recreation.”

2 -The BLM is required to comply with the Clean Water Act. The State of Oregon establishes the standards. Section 5.10 in the LAMP describes the standards and stream segments not meeting this standard.

3 - By managing riparian and upland areas correctly, it is assumed water quality will improve. Improving upland and riparian conditions flatten peak flows and smooth hydrologic events by decreasing the effects of timing and duration of flow. This is reflected in water quality improvements. When adequate vegetation, land form, and/or woody debris is present to dissipate energy associated with high flows, then a number of physical changes begin to occur, such as reduced erosion, sediment deposition, and improved flood-water retention. As the physical processes of a system begin to function, they start the process of developing pond and channel characteristics that provide habitat for fish and wildlife and other values. An example of streams in Oregon that have been shown to have improved water quality due to actions of the BLM include Little Whitehorse Creek, Willow Creek, and Fifteen Mile Creek in the Trout Creek Mountains.

4 - The State of Oregon lists the streams as “severe” as they do not meet the state’s water quality standards as described in “Oregon Statewide Assessment of Non-point Sources of Water Pollution”. Streams on this list have similar characteristics (refer to “Characterization of the Landscape” in LAMP) and uses to other streams in the subbasin; therefore it is extrapolated that

other streams in similar areas do not meet Clean Water Act requirements. This paragraph has been edited to read

“As part of meeting the requirements of the Clean Water Act, the State of Oregon produced the 1988 Oregon Statewide Assessment of the Non-point Sources of Water Pollution Report (ODEQ 1988). This report identified waters affected by non-point source pollution, categories of non-point source pollution, the process for identifying BMPs, and State and local non-point source programs. The report lists stream segments in the Bully Creek area with moderate to severe (based on data or observation) water quality impacts affecting desired beneficial uses (Table 4).

As part of fulfilling its requirements with the EPA under Section 303(d) of the Clean Water Act, the State of Oregon has updated its list of “water quality limited” waters. The current (1998) listing of waters that do not meet the State’s water quality standards is based upon actual evidence of violation. The following is a list of 303(d) streams in the Bully Creek Landscape Area as determined by ODEQ. Further information on the listing process is available in the draft SEORMP (1998b).

- Bully Creek, Bully Creek Reservoir to Westfall, dissolved oxygen, pH
- Pole Creek, Mouth to Headwaters, temperature”

5 - This table was incorrectly referenced as a BLM source in the draft LAMP. Table 4 has correctly been referenced to the State of Oregon’s 1988 Oregon Statewide Assessment of the Non-point Sources of Water Pollution Report (ODEQ 1988) discussed in our previous response to you. We recognize this document as a valid data source and have kept it in the LAMP.

6 - Please refer to response 3 in this section.

7 - Proposed future projects outlined in the LAMP, such as prescribed burns, seedings and brush control have mitigating measures developed to reduce short term negative impacts to water quality such as deferment of grazing use and erosion structures to prevent soil movement. As stewards of your public lands, we are always accountable for our actions and thus we listed the possible Unavoidable Adverse Effects of the proposed actions in Section 4.17 of the EA that included erosion from climatic events following project work to make the reader aware of the impacts.

Short-term is 0-5 years in length and long-term is 20 years and longer. Please refer to the EA where we discussed the impacts to soils from the proposed action. Vegetation treatments to increase desirable herbaceous, shrub, and tree species can include juniper controls, controlled burns, and plantings. Predictions on the success rate of plantings is variable within the BLM Vale District depending on many variables including soil moisture levels the following growing season and utilization of the plantings by ungulates. Our past success rates have varied from 10 to 40%. Additional information on the success of plantings is also available through research

and literature sources. Plantings are only one of the many tools in adaptive management that we can use to improve riparian and/or upland areas and won't be solely relied upon for improvement.

8 - Roads do have an impact of the functionality of a stream, but these impacts are localized within the Bully Creek Geographic Area. Currently, BLM is not monitoring sediment loads or other effects on streams by roads. The PFC assessment is used to indicate when sediment is limiting the functionality of a stream. Roads were indicated as causing improperly functioning streams and have been added to the pasture summaries in Appendix C.

Letter 015

COMMENT

1 - Resource values such as water quality and quantity and wildlife habitat cannot be effectively analyzed without current data to evaluate watershed viability.

2 - The BLM has failed to address directly the issue of water quality improvement in the LAMP area. While the agency does acknowledge that "other streams in the landscape area exhibit all or many of the same non-source point pollution problems" as the 303(d) listed streams and water bodies, the agency does not propose an annual requirement that all surface water sources in the LAMP area meet Oregon state water quality standards for all beneficial uses which exist in these waters every year. The BLM must also provide a requirement that monitoring be carried out to confirm whether water quality standards are in compliance with Oregon law annually. Both of these requirements should be placed as terms and conditions on the grazing permits.

RESPONSE

1 - Please refer to our response 3 to letter 007 in this section.

2 - Please refer to our response 3 to letter 007 in this section. The BLM is not currently required to annually monitor all streams for water quality, but where monitoring does occur, it is limited to water temperature in streams on the 303(d) list at this time.

Letter 018

COMMENT

1 - The Bully Creek LAMP is largely driven by water quality and riparian considerations.

Failures to meet water quality standards are linked to faults of the permittee's grazing practices. The LAMP also accepts water quality standards regardless whether they are within stream site potentials.

2 - I am very concerned that the way we are managing the higher elevation landscapes may be progressively precluding aquifer recharge. Aquifer recharge is necessary for summer stream flows. Only a minority of the land area (mostly in the upper elevations included in the Bully Creek LAMP area) has most of the potential for water to be absorbed in the late winter and spring that could replenish the water table. The aquifers slowly release water to upland streams through the summer. My feeling that a commitment to water quality will encompass effective juniper control.

RESPONSE

1 - Grazing is one of the many causes responsible for degraded water quality. Other causes may have significant localized impacts but are not significant across the entire landscape. The BLM is bound by The Clean Water Act and State of Oregon law to meet standards. These Standards are not established with regard to site potentials. Please also refer to our response 3 to letter 007 in this section for further information.

2 - Standard 1 focuses on soil processes that contribute to aquifer recharge. Standard 2 also includes improving soil-water storage and aquifer recharge through stream bank stability and achieving correct hydrologic processes. We share your concerns and desire for effective juniper control. Please see our responses to comments in the Juniper Encroachment Section of this document and within the Bully Creek LAMP for more information on goals and future control efforts.

CATEGORY 21 - Weeds

Letter 007

COMMENT

1 - Concerning Issue #5 on page 11. This document fails to address in a meaningful way the current knowledge and management techniques being used to address weed invasions.

2 - Concerning the EA, Section 4.5 Weeds - 4.5.1 Alternative A- last paragraph on page 15 of the EA. Include in this discussion how you will use grazing to help manage weeds.

RESPONSE

1 - Issue #5 has been rewritten to more adequately address and clarify our treatment strategy and weed control techniques. It has also been expanded to better articulate the rationale for expecting overall reductions in problems associated with existing listed County “B” and “C” weeds.

2 - Although research has shown that certain weed species are controlled by non-traditional methods, such as grazing weeds with sheep or goats, those susceptible weed species are not known to exist in the LAMP area. As part of our Integrated Weed Management program (IWM), all control methods, i.e., chemical, mechanical, biological and cultural, are considered for each individual weed site. Proposed management practices outlined in the LAMP, including permitted livestock use, are expected to improve habitat conditions in the long term which will favor weed control. Section 4.5.1 has been rewritten to better articulate our weed control strategy.

Letter 018

COMMENT

1 - The Bully Creek LAMP needs to be substantially revised to reflect the immediate dangers of weed invasion.

RESPONSE

1 - It was not our intent to underscore the dangers of weed invasion. On page 5 of the document under the Introduction Section, we discussed the three levels of planning beginning with ICBEMP (multi-state planning), SEORMP/EIS (sub-regional level planning), and the LAMP (subbasin level). We further said that the LAMP would not reiterate the findings or analysis presented in the higher level planning documents, but would reference pertinent sections for supporting text. The dangers of weed invasion are fully covered in these larger documents, but we may have failed in making a clear link to the LAMP.

Thus the Weed Issue and Objective Sections have been rewritten to more adequately address and clarify our treatment strategy and weed control techniques. It has also been expanded to better articulate the rationale for expecting overall reductions in problems associated with existing listed County “B” and “C” weeds. Please also see our responses 1 and 2 to letter 007 in this section for additional information.

CATEGORY 22 - Wildlife Habitat/Sage Grouse

Letter 007

COMMENT

1 - Concerning Issue #6 on page 11. Which portions of the area are failing to meet SRH for wildlife? Which standards are being referred to in this section? Standard 3 (Table 2) speaks to healthy, productive and diverse plant and animal populations appropriate to soil, climate and land form. How are the plant and animals being impacted with regard to this standard? This issue needs to be clarified and strengthened or dropped completely.

RESPONSE

1 - The Wildlife Habitat Issue was developed from public input during scoping meetings and does not relate only to SRH. The LAMP document combines public input, regulatory directives (such as SRH) and legal mandates (such as the ESA) into a single management project that may not directly pertain to a single source for an Issue. Appendix C in the LAMP identifies individual pastures failing to meet each Standard, including 3 and 5, and contains summarized information on why. The SRH is an overlapping approach to rangeland health where each Standard relies on information from other Standards to portray the interdependence of the environment. For example, soil stability clearly will affect riparian health, plant community health, water quality, and the habitat potential of native plants and wildlife.

Letter 009

COMMENT

1 - It would be premature at this point to place yet another burden on the grazing program in the form of a 40% use limit within 2 miles of sage grouse leks when there is really no evidence to indicate the existing grazing management is either harmful or beneficial to sage grouse.

RESPONSE

1 - BLM is trying to be consistent with the latest information provided to us concerning sage grouse as we propose a management strategy for protecting nesting, brood rearing and winter habitat. The Section has been rewritten to better reflect current information and place it in the context of the Bully Creek subbasin. Some management strategies, such as reducing disturbance to courting sage grouse by deferring livestock use until after May in pastures with leks, conflicts with the preferred riparian management technique of emphasizing early season grazing. These trade-offs can be determined by relating the issues described in the individual pasture write-up in Appendix C with the grazing systems detailed in the tables. BLM will amend the management prescriptions for sage grouse as new information, new policies or as possible future ESA listing

dictates.

The 40% use limit was established to reflect the amount of livestock use that could occur in pastures grazed after seed ripe where sage grouse are believed to be nesting. This amount of use in a pasture reflects the typical placement of utilization studies in relation to water and roads such that approximately half a pasture would contain areas with 7-9" of perennial grass stubble available for nesting grouse the following spring. In pastures grazed early, when soil moisture will allow total regrowth of grasses after cattle are removed, the utilization cap on upland vegetation is less important than keeping livestock density low around leks and to minimize the disturbance to incubating hens. We have developed these use limits and residual herbaceous vegetation heights based on the following recommendations/literature: Braun C.E. 1998; Call, M.W. and C. Maser. 1985; DeLong, A.K., J.A. Crawford, and D.C. DeLong. 1995; Drut, M.S., J.A. Crawford, and M.A. Gregg, 1994; Hanf, J.M., P.A. Schmidt, and E.B. Groshens, 1994; Martin, N.S. 1990; Oregon Dept. of Fish and Wildlife, 1993; Pyle, W.H. and J.A. Crawford, 1996; Wakkinen, W.L., K.P. Reese, and J.W. Connelly, 1992; Wallestad, R.O. and D.B. Pyrah, 1974; and Welsh, B.L., F.J. Wagstaff, and J.A. Roberson, 1991. References are listed in the LAMP: Literature Cited.

Letter 015

COMMENT

1 - Map 5 on page B-5 details the locations of numerous sage grouse leks within the Bully Creek Landscape Area and these sites need to be protected from livestock grazing within a five-mile radius in order to ensure the success of nesting and brood rearing activities. We also recommend that the residual perennial grass stubble height for sage grass nesting habitat, as displayed on page 34 of the LAMP, be extended to a 20 mile radius from all known leks.

2 - As part of this designation and clarification, the BLM must develop a carrying capacity for these allotments that reflects an equitable distribution of available forage between native wildlife and introduced exotic livestock species. What is the current and proposed ratio of allocated forage under this LAMP decision?

RESPONSE

1 - Please refer to our response 1 to letter 009 in this section for our reasons for proposing the use levels we have.

2 - Thank you for pointing out our omission. Wildlife forage demand, by allotment, was identified in Appendix E of the SEORMP to meet ODFW big game objectives. We have added this information, by allotment, to Appendix C of the LAMP. Our ability to provide forage for native wildlife was evaluated during our SRH field assessment of the Bully Creek area in 1998.

The ability of each pasture to provide habitat (including forage) for key wildlife species was determined and is also displayed in Appendix C in the SRH Table under Standard 5. BLM is committed to insuring sufficient habitat (forage, water, cover and security) features are present throughout the year to support the diverse wildlife community. Where Standard 5 has not been met we have and will be identifying management actions that need to be completed to bring the pasture/allotment/area back into compliance with this standard.